CANADA

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons

The Commissioner's Observations – 2000

Foreword and Main Points

2000

This 2000 Report comprises 9 chapters, including "The Commissioner's Observations" and a Foreword. In order to better meet clients' needs, the Report is available in a variety of formats. If you wish to obtain another format or other material, the Table of Contents and the order form are found at the end of this chapter.

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Cat. No. FA1–2/2000–0
ISBN 0–662–64976–1

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AUDITOR GENERAL OF CANADA
COMMISSIONER OF THE ENVIRONMENT
AND SUSTAINABLE DEVELOPMENT

CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA
COMMISSAIRE À L'ENVIRONNEMENT
ET AU DÉVELOPPEMENT DURABLE

To the Honourable the Speaker of the House of Commons:

On behalf of the Auditor General of Canada, I have the honour to transmit herewith my Report to the House of Commons for the year 2000, to be laid before the House in accordance with the provisions of section 23(3) of the *Auditor General Act*.

Richard Smith

Richard Smith
Acting Commissioner of the Environment
and Sustainable Development

OTTAWA, 30 May 2000

TO THE READER:

I welcome your comments and suggestions on this Report and other issues related to the environment and sustainable development. I can be reached at:

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Foreword

Report of the Commissioner of the Environment and Sustainable Development – 2000

Foreword

As Acting Commissioner of the Environment and Sustainable Development, I am pleased to present the 2000 Report for tabling in the House of Commons.

Much of this Report was prepared under the leadership of Brian Emmett, who became Vice-President of Policy at the Canadian International Development Agency on 31 January 2000. During his three and a half years as the first Commissioner, Brian made a major contribution to our understanding of the federal government's management of environmental and sustainable development issues. The team he built is committed to continuing the work he began, and the Auditor General is undertaking a national selection process in order to appoint a new Commissioner this summer.

This Foreword is followed by "The Commissioner's Observations – 2000" and the Main Points from all of this year's chapters. The Report also contains nine chapters, bound separately:

Managing for Sustainable Development

1. Implementing Sustainable Development Strategies: Year Two – Work in Progress
2. Greening Government Operations: When Will the Government Measure Up?
3. Government Support for Energy Investments

Smog

4. Smog: Our Health at Risk

Working Together

5. Partnerships for Sustainable Development: Overview
6. Working Together in the Federal Government
7. Co-operation Between Federal, Provincial and Territorial Governments
8. Working With the Private Sector

Follow-up

9. Follow-up of Previous Audits: More Action Needed

The Commissioner's Observations — 2000

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The Commissioner's Observations — 2000

Main Points

1. Although the federal government has repeatedly stated its commitment to sustainable development — striking a viable balance between economic, social and environmental goals, now and for future generations — it continues to have difficulty turning that commitment into action.

2. The pursuit of sustainable development is complicated by the fact that responsibility for it is widely shared between departments, between governments and with other partners. Typically, a number of organizations are responsible for one aspect of the issue or another but none is responsible for the whole. They need to work together to develop and implement a co-ordinated approach. But managing these working relationships has proved difficult.

3. **Smog — our health at risk.** For example, over the last decade the federal government has often said that Canada's smog problem is a major health issue and one that poses a serious threat to the environment. Ten years ago, federal, provincial and territorial ministers of the environment recognized the serious consequences of ground-level ozone — a key component of smog — and endorsed a plan to reduce it. The goal was to "fully resolve" the problem by 2005.

- Governments started on the right foot, but failed to take the next steps. They agreed on a plan, but did not implement it. Past improvements in air quality are slowly being eroded by the increased emissions from more vehicles and growing energy use. And pollutant levels once thought safe are now being questioned.
- Canada's smog plan failed because the partnership that underpinned it did not work. While the federal government did most of what it said it would do, it failed in its most important task — to lead the national effort to reduce smog. Canada's smog problem is far from resolved. A new approach is needed.

4. **Smog is not an isolated case.** In earlier reports, we identified persistent problems with the federal government's management of key issues like climate change, toxic substances and biodiversity. Problems included unclear objectives and roles and responsibilities, poor performance measurement and reporting and inadequate provision for review and audit. As a result, commitments made to Canadians were not being met.

5. **Accountability is crucial to building effective working relationships.** This Report provides a number of examples of successful working relationships — those that combine credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest. Too often, however, entering an agreement is seen as an end in itself, rather than a means of delivering results for Canadians in an efficient and effective manner. And too often, many of the accountability factors that are critical for an effective working relationship are not "top of mind" when partnerships are being built. Central agencies have important roles to play in ensuring that the elements of a good working relationship are understood and used by departments.

6. **Other key issues:**

- **Government support: renewable and non-renewable energy investments.** Historically, most energy-related federal spending and tax incentives have been directed to non-renewable resources, the predominant source of energy in Canada. Today, with a few exceptions, government support for energy investments does not particularly favour one sector over the other. However, a survey of investors found that many renewable energy and energy efficiency projects do not currently have characteristics that make them attractive to investors. The federal government may want, therefore, to reconsider its strategy for achieving its renewable energy and energy efficiency objectives.

- **Sustainable development strategies.** Departments reported that they had implemented 20 percent of the commitments set out in their strategies, compared with 11 percent last year. They are also improving the management practices that support strategy implementation. Their second strategies will be tabled in the House of Commons by December 2000; I expect to see a significant improvement in their quality at that time.
- **Greening government operations.** A decade ago, the federal government committed to demonstrating leadership by reducing the environmental consequences of its own operations. Today, however, there is only rudimentary information available about the government's operations and their environmental consequences. No organization has been given the responsibility, or sees itself as the lead, to establish a coherent approach to greening government operations and reporting on progress.

7. **Follow-up on earlier work.** This Report also presents the first follow-up we have done since the position of Commissioner was established. Follow-up helps us determine whether departments have adequately addressed our earlier observations and recommendations. Overall, progress has been slow. After two years, only five percent of recommendations have been addressed fully; on 53 percent, progress is unsatisfactory. Departments need to accelerate their efforts.

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Introduction

8. This chapter highlights the key issues that I believe should be brought to the attention of the House of Commons. Previous reports have identified three key weaknesses in the federal government's management of environmental and sustainable development issues (see Exhibit 1). This Report focusses on the challenges of working in areas where responsibilities are widely shared.

Managing interdependence

9. Some of the most pressing challenges facing governments today — including protecting the environment and promoting sustainable development — cut across departmental mandates and political jurisdictions. Typically, a number of government organizations are responsible for one aspect of an issue or another, but none is responsible for the whole. They need to work together to develop and implement a co-ordinated response.

10. Partnerships can offer the potential for more innovative, cost-effective and efficient delivery of programs and services. But partnering is not without risks. The risks include arrangements poorly defined, commitments not met, insufficient attention to protecting the public interest, too little transparency and inadequate accountability. Too often, entering an agreement is seen as an end in itself rather than a means of delivering results for Canadians in an efficient and effective way. As our previous reports have indicated, managing these types of working relationships — within governments, between governments and with other partners — has proved to be a challenge.

11. When organizations work together, the accountability relationship — the obligation to answer for a responsibility conferred — becomes more complex. Ten years ago, the Auditor General asked, "Who is minding the store?" when it came to responsibility for Canada's environmental well-being. He noted that the Department of the Environment, which has general responsibility for co-ordinating federal environmental policies and programs, could not act effectively on broad issues except in concert with other departments and other governments. While recognizing that shared responsibility in government is difficult to deal with, he argued that what must be prevented is a diffusion of responsibility to the point where effective accountability is lost.

12. Based on work since then, the Auditor General has identified desirable attributes of working arrangements — where partners work together to meet

Responsibilities for the achievement of sustainable development goals are widely shared. Managing shared responsibilities has been a challenge.

Exhibit 1

Key Weaknesses in the Federal Government's Management of Environmental and Sustainable Development Issues

Gaps between commitments made and concrete action taken. Canadians have been at the forefront of thinking about environmental and sustainable development issues, domestically and internationally. We have been less effective at turning those thoughts and words into action – in finishing what we start. In many areas, the federal government's performance falls well short of its stated objectives.

Lack of co-ordination among departments and across jurisdictions. Some of the most pressing issues facing governments today cut across departmental mandates and political jurisdictions. Effective co-ordination is essential for meeting our sustainable development challenges – governments are not very good at it.

Inadequate review of performance and provision of information to Parliament. Good information is critical for good decisions: for setting priorities, designing policies and programs, assessing progress and reporting on accomplishments. Our current information base is not up to those tasks.

Source: Report of the Commissioner of the Environment and Sustainable Development, 1999

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common objectives (see Exhibit 2). Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of such a framework.

Focus of this Report

13. This Report maintains our focus on the challenges the federal government faces in managing its environmental and sustainable development agenda. Partnerships have figured prominently in the federal government's approach. In the past decade, numerous commitments have been made that require co-operation and co-ordination across departments, between governments and with other partners if objectives are to be met.

Exhibit 2

A Governing Framework for New Working Arrangements

To ensure credible *reporting*:

- Clear public objectives
- Concrete performance expectations
- Appropriate performance measurement and reporting regime

To establish effective *accountability mechanisms*:

- Clear roles and responsibilities
- Performance expectations that are balanced with capabilities
- Well-defined management structure
- Appropriate monitoring regime
- Partner dispute resolution mechanisms
- Specific evaluation provisions
- Procedures to deal with non-performance
- Appropriate audit regime

To ensure adequate *transparency*:

- Public access to information
- Communication of information on key policies and decisions

To protect the *public interest*:

- Citizen complaint and redress mechanisms
- Public consultation/feedback mechanisms
- Policies to promote pertinent public sector values

Source: Report of the Auditor General of Canada, 1999
Involving Others in Governing: Accountability at Risk (Chapter 23)

14. In looking at issues like smog, acid rain, protected areas, biotechnology and greening of government operations, we identified the key ingredients for building and sustaining effective working relationships. Those ingredients can serve as a basis for assessing current initiatives, for modifying them, and for designing new ones.

Smog: Our Health at Risk

Smog is a serious threat to our health and the environment

15. We examined the federal government's efforts to reduce levels of the air pollutants that are the main components of smog; Chapter 4 presents our results. While air pollution is not new, it does have important consequences for our health, our environment and our economy. People first used the term "smog" to describe the mixture of smoke and fog in the air above cities. Today, the term is used to describe a broader "basket" of air pollutants. Most of those pollutants are caused by industrial activities and the burning of fossil fuels — oil, natural gas and coal — in our motor vehicles and in our homes, thermal power plants and factories.

16. Over the last decade, the federal government has stated repeatedly that Canada's smog problem is a major public health issue and one that poses a serious threat to the environment. While recognizing the difficulty of drawing a direct link, the government has estimated that air pollution is responsible for 5,000 premature deaths a year in 11 major Canadian cities. If that figure is correct, more Canadians die each year as a result of air pollution than die as a result of motor vehicle accidents, breast cancer, prostate cancer or melanoma. In addition, many more Canadians suffer from common objectives (see Exhibit 2). Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of such a framework.

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17. There have been downward trends in some air pollutants, and overall air quality in Canada has improved over the past 30 years as a result of efforts made by federal and provincial governments and by industry. However, past improvements in air quality are slowly being eroded by the increased emissions from a greater number of vehicles and growing energy consumption and production. Environment Canada expects that air quality will continue to deteriorate unless strong action is taken. In addition, pollutant levels once thought safe are being questioned.

Starting on the right foot — but failing to take the next steps

18. In 1990 the Canadian Council of Ministers of the Environment recognized the serious consequences of ground-level ozone and endorsed a plan to reduce it. This plan was a major achievement for the federal, provincial and territorial governments and provided sound strategic direction for addressing Canada's smog problem. The goal was to "fully resolve" the ozone problems by 2005.

19. After endorsing the plan, however, the partners never agreed on how to implement it — on who would do what and by when. As a result, the plan was destined to fail. And 10 years later, many of the basic elements of good management are still missing. The federal government now acknowledges that progress has been slower than planned, and that the original target date will likely not be met.

20. We concluded that the federal government did most of what it said it would do under the first phase of the plan. However, it failed at its most important task — to lead the national effort to reduce smog. Consequently, the bulk of potential emission reductions — which were expected to come from others — were not attained. I believe the federal government has a responsibility that goes beyond its own smog-reduction activities. It also has to collaborate with the provinces and territories and work with its other partners to develop effective national strategies and plans. If the existing approach is not working, a new one needs to be devised.

Canada's smog problem is a major public health issue.

Accountability depends on the quality of reporting on performance

21. The federal government also failed to provide the public and Parliament with appropriate information about action on the promises it made to Canadians in 1990 and about the results of national efforts. To be useful, information must be relevant, credible and understandable. It should help the public and members of Parliament scrutinize both intentions and results, and it should be available to them on a timely basis. The failure to provide that information meant that the public and Parliament could not determine whether Canada was addressing its smog problem at a reasonable pace.

The plan to resolve Canada's smog problem was never implemented.

Next steps

22. Canada is continuing to address the smog issue through the Canada-Wide Standards process. This process is to include the commitments that each jurisdiction will make to specific action on smog. If air quality is to improve, the lessons learned in the last decade need to be applied to this process. In particular, parliamentarians and all Canadians should expect to see agreements specifying who will do what and by when, a system for monitoring and reporting results to assess progress, and provision for midcourse corrections as required. If these key elements of good management are not put in place, it will be difficult for the Canada-Wide Standards process to succeed.

Working Together: Partnerships for Sustainable Development

Canada's smog plan failed because the partnership that underpinned it did not work.

23. Canada's smog plan failed because the partnership that underpinned it did not work. Yet smog is not an isolated case:

- In 1998 we reported on Canada's National Action Program on Climate Change. By the federal government's own assessment, instead of moving toward stabilization at 1990 levels, Canada's greenhouse gas emissions were headed in the wrong direction. We found that many of the elements of a good partnership were missing. There was no clear assignment of roles and responsibilities, no implementation plan, limited monitoring of progress and no consolidated, summary-level reporting to Parliament.
- Protecting biodiversity requires action by ministries at both the federal and provincial levels. In 1998 we reported that progress was slow, due in part to weaknesses in co-ordination within the federal government and between governments.
- Our 1999 audit found significant weaknesses in the federal government's management of toxic substances. We noted in particular that federal departments were deeply divided on many key issues. The behaviour displayed by some departments was a major impediment to the effectiveness of federal programs.
- Finally, in 1999 we audited seven federal-provincial environmental agreements and found that they were not working as well as they could.

24. The federal government recognizes that managing what has become known as "horizontal" government is an important issue and that a better job must be done. Because the resolution of many environmental and sustainable development issues requires effective working relationships, we have looked at building and sustaining them. Chapter 5 provides an overview, Chapter 6 reports on working together in the federal government, Chapter 7 on federal/provincial/territorial relationships and Chapter 8 on working with the private sector. These chapters together present the results of 17 case studies of organizations working co-operatively to meet common objectives in areas like biotechnology, acid rain, forestry and mining.

25. These case studies illustrate the importance of co-operation and co-ordination to meet common policy objectives and improve program efficiency and effectiveness. The case studies also illustrate that there are common attributes of effective working relationships, whether between departments, between governments or between the public and private sectors.

Accountability is not "top of mind" when people think of successful partnerships.

26. We found, however, that many of the accountability factors that are critical for an effective working relationship are not "top of mind" when people think of building a successful partnership. Surveyed participants in the arrangements we looked at focussed on five key success factors: clear and realistic objectives and expectations for results; shared or complementary goals; effective and committed individuals; clear benefits for participating organizations; and senior management interest, support and commitment.

27. These factors are important, but so are the other elements needed for accountability — clear roles and responsibilities, balance between expectations and capacities, provision for monitoring, reporting and evaluation — and participants placed these elements well down the list.

28. To manage their working relationships effectively, departments need to take a broader view of what constitutes success, giving greater weight to accountability. People involved in partnerships do know how to develop and maintain working relationships and what is needed for accountability. The challenge is to turn that knowledge into action.

29. The case studies also demonstrate that the partners need the discipline to follow all the necessary steps during the life cycle of an agreement. In the earlier stages — before entering the agreement — prospective partners need to pay particular attention to developing the relationship. Partners need to be convinced that the issue is important and that a partnership is the best way of dealing with it. In the later stages — designing the agreement itself and during the life of the agreement — more weight needs to be placed on accountability. Developing the relationship and ensuring accountability are both essential for a good working relationship intended to achieve common objectives.

30. The cases we examined also provide examples of a "tight-loose" form of working relationship — "tight" on the results to be achieved by intergovernmental agreement, and "loose" on the means of achieving them in the particular circumstances of each jurisdiction. In the 1985 Eastern Canada Acid Rain Program, ministers agreed on sulphur dioxide emission limits to protect moderately sensitive aquatic systems. Provincial governments decided how to achieve the reductions; they took different approaches but met their objectives.

31. We conclude that when the key factors related to a good working relationship are combined with the main elements of an effective accountability arrangement, successful working relationships are more likely to be developed and common objectives are more likely to be met. Conversely, the absence of these factors and elements increases the risk of failure.

To get results, departments need to place more weight on accountability.

The role of central agencies

32. Central agencies can contribute to the more effective management of cross-cutting issues. The Privy Council Office and the Treasury Board Secretariat have important roles to play in ensuring that the principles and elements of a good working relationship are understood and used by departments, and in co-ordinating horizontal initiatives.

Government Support for Energy Investments

33. The consumption and production of fossil fuels are major contributors to smog and to other environmental problems. Some believe that federal government support for energy investments is biased in favour of non-renewable energy sources, particularly fossil fuels, and that the bulk of this support is hidden in the tax system. In Chapter 3 we report on the findings of a study we did to provide information on government support for energy investments and to determine whether this support favours the non-renewable energy sector. We were particularly interested in support provided through the tax system because it is less transparent than direct support. We also wanted to learn why, apart from large-scale hydro-electric projects, energy from renewable resources makes up a small portion of Canada's energy mix. Is the tax system a major contributor to this situation?

Central agencies can contribute to the more effective management of cross-cutting issues.

34. Historically, governments have supported the development of energy sources and encouraged energy efficiency for a variety of reasons, including securing the supply of energy, developing regional economies and addressing environmental concerns. In 1996, the federal government stated in its Renewable Energy Strategy that it wants to increase investments in renewable energy. It has also stated for many years that it wants Canadians to use energy more efficiently.

35. In the past, most federal spending and tax incentives have been directed to non-renewable resources, the predominant source of energy in Canada. Today, however, with a few exceptions, government support for energy investments does not particularly favour the non-renewable sector over the renewable sector. We also found that the income tax system does not encourage some investments in energy efficiency.

Renewable energy and energy efficiency projects are competing against many other investment opportunities.

36. From an investor's perspective, renewable energy and energy efficiency projects are competing against many other investment opportunities. Most investors we surveyed find that many renewable energy projects do not provide an adequate rate of return to make them a desirable investment. They tend to lack the established markets and good track records that attract investors. The payback period is often too long for renewable energy and energy efficiency investments to make them the preferred investment choice. Given these barriers, the federal government may wish to consider new strategies for achieving its renewable energy and energy efficiency objectives.

Turning Talk Into Action

The government has committed to making itself a model of environmental excellence.

Implementing sustainable development strategies

37. Departmental strategies are an important element of the federal government's overall sustainable development agenda. Monitoring and reporting on progress toward sustainable development is a key part of our mandate. Our objective is to help parliamentarians understand and exercise oversight of the strategy process, and to help departments understand their management obligations and best practices for meeting them. Chapter 1 of this Report provides our second assessment of sustainable development strategies. The strategies remain a work in progress.

38. When we conducted our audit this year, departments were about halfway through the period covered by their strategies. According to their own reports, departments had completed about 20 percent of what their strategies said they would do, compared with 11 percent last year. They are making some progress in implementing their action plans.

39. However, the quality of the information that most departments provided to Parliament in their second annual progress reports on sustainable development strategies continues to fall well short of the standard asked by the Treasury Board. It remains difficult to judge whether the strategies are on track or whether corrective action is required.

40. Departments are still in the early stages of establishing a systematic approach to strategy implementation. We examined the management practices of six departments and noted that there has been some improvement since last year. On average they were applying half of the practices needed to provide reasonable assurance that they would achieve their intended results. As Exhibit 3 illustrates, last year the departments we looked at had established only about one third of these management practices.

41. The exhibit also shows that departmental practices continue to be strongest at the early stages of the management cycle, and become progressively weaker as departments move into implementation, monitoring and improvement. Departments need to establish sound management systems to support the implementation of their strategies.

Greening federal government operations

42. A decade ago, the federal government committed to demonstrating leadership by reducing the environmental consequences of its own operations. In the October 1999 Speech from the Throne, the government again committed to making itself a model of environmental excellence.

43. In 1996, we reviewed progress and found an absence of leadership for the greening process, both government-wide and within individual departments and agencies. We also found that reporting on progress had been selective. No overall report had been produced, and there were no plans for aggregate reporting in the future.

44. Last year, we reported that departments were not yet in a position to track their environmental performance and there was no basis for reporting to Parliament on government-wide progress in the "greening" of operations. Chapter 2 of this Report revisits this issue, focussing on departments' progress in measuring the environmental performance of their internal operations.

45. The federal government is the largest enterprise in Canada. It has 224,000 employees, 21.4 million hectares of land under direct management, 59,000 buildings and facilities, more than $8 billion in purchases of goods and services and 25,000 motor vehicles. How it manages those resources has significant environmental and financial consequences.

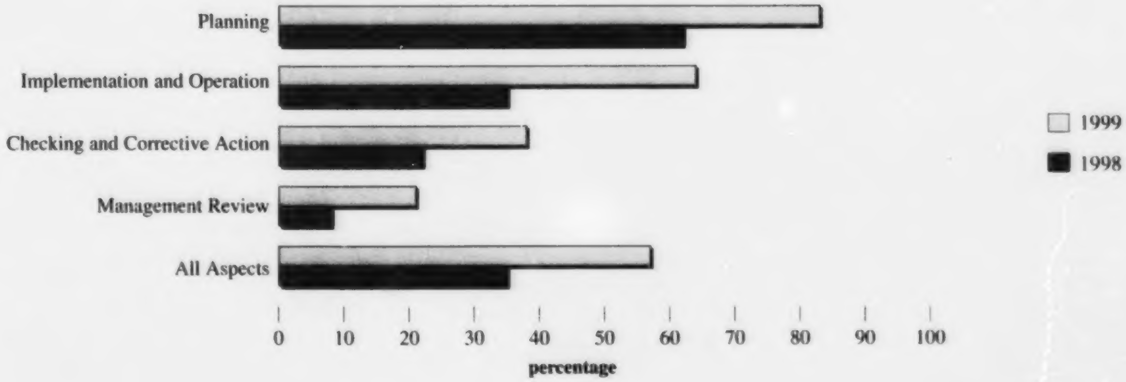
46. And yet there is only rudimentary information available on the government's vast operations and their environmental consequences. The federal government does not know the environmental impacts and costs of its operations — and it should. Progress has also been slow and uneven in developing either an environmental performance measurement system or common performance measures for departments. There are still no aggregate performance reports.

47. While there are a number of interdepartmental initiatives under way, leadership is fragmented. No organization has been given the responsibility, or sees itself as the lead, for establishing a coherent approach to greening government operations and reporting on progress. Central agencies have an important role to play in developing government-wide standards.

Exhibit 3

Established Management Practices Compared With the ISO 14001 Standard — Average for the Six Departments We Examined in 1999 and the Six We Examined in 1998

See Chapter 1 for more information.



Follow-up of Previous Audits: More Action Needed

Overall, progress in addressing our observations and recommendations from previous reports has been slow.

48. Follow-up is an important part of our audit process. It allows us to keep Parliament informed of the progress departments are making in response to our reports. Chapter 9 presents the results of the first follow-up we have done since the position of Commissioner was established. The purpose of this follow-up was to determine whether departments had adequately addressed our recommendations and observations.

49. We focussed on four audits presented in 1997 and 1998 report chapters: Control of the Transboundary Movement of Hazardous Waste (April 1997), Ozone Layer Protection: The Unfinished Journey (December 1997), Canada's Biodiversity Clock Is Ticking (May 1998), and Environmental Assessment: A Critical Tool for Sustainable Development (May 1998).

50. I am satisfied with the progress that the government has made to date in acting on our observations and recommendations in the ozone and biodiversity chapters. Environment Canada continues to show commitment and leadership in developing policies and programs to eliminate or reduce ozone-depleting substances. International obligations are being met. Departments are developing biodiversity performance frameworks and Canada is participating in the development of an international reporting framework. New partnerships have been formed to enhance co-operation.

51. I am not satisfied with progress on the transboundary movement of hazardous waste. Canada is still not in a position to know the extent to which it is fulfilling its international obligations to prevent illegal traffic at the border and does not have an action plan to address significant gaps in enforcement.

52. The Canadian Environmental Assessment Agency has taken reasonable steps to respond to our audit findings. The Agency conducted a compliance review with departments and issued guidance documents, as we had recommended. However, we are not satisfied with the progress made by other departments and agencies. Even departments that have taken some action to improve their assessment processes report little change in their actual practices.

53. Overall, progress in addressing our recommendations has been slow. Gaps in implementation, information, leadership and managing of relationships are apparent. Only five percent of our recommendations have been addressed fully; progress on 53 percent is unsatisfactory. We believe the recommendations remain pertinent and valid; departments need to accelerate their efforts. We will continue to monitor their progress.

Our Work Plan

54. Our work program is divided into four broad areas: the review of departmental sustainable development strategies and their implementation; audits of the federal government's management of environmental and sustainable development issues; studies aimed at improving understanding and strengthening management practices; and the monitoring of petitions. Exhibit 4 summarizes our work plan for next year.

Review of sustainable development strategies

55. Departmental strategies are an important tool for advancing sustainable development across the federal government. They set out each department's objectives and the steps it will take to meet them. Departments released their first strategies in 1997. They are now developing their second strategies for presentation to the House of Commons by December 2000.

56. The sustainable development strategy update. In December 1999 we issued a document setting out expectations for the second round of sustainable development strategies. Departments were asked to focus their efforts on three areas:

- **assessing** their first strategies — determining what the first strategy has achieved, what has changed, and what needs to be done differently — and making those assessments available in the consultations leading to the second strategies;
- strengthening the **planning** of strategies — drawing clear links between the departments' activities, the significant impacts of those activities and the departments' priorities for action; and
- accelerating the development of the **management systems** needed to turn the strategies from talk into action.

57. In each of these areas, the support, involvement and commitment of senior management will be critical to move the organization up the learning curve. In keeping with this Report's theme — working together — the December document also indicated that departments need to work together in areas of shared responsibility.

58. Implementing sustainable development strategies. Since the release of their strategies, departments have turned their attention to delivery. In 1998 and 1999 they issued progress reports on their strategies. The progress reports are intended to help parliamentarians, the public and the departments themselves judge whether the strategies are on track or whether corrective action is required.

59. We will continue to report each year on the extent to which departments have done what they said they would do in their strategies. We will also continue to examine departments' capacity to deliver their strategies, using the ISO 14001 standard as our benchmark.

60. Establishing clear and measurable targets. In 1998 we recommended that departments establish a clear set of benchmarks to judge whether their strategies are being implemented

Departments are now developing their second sustainable development strategies for presentation to the House of Commons by December 2000. I expect a significant improvement in their quality.

Exhibit 4

Environment and Sustainable Development Issues: Our Work Plan

Task	2001
Departmental sustainable development strategies	Conduct audits of: • second sustainable development strategies • strategy implementation
Integrating the fourth "E" into the work of the Office of the Auditor General Has money been spent with due regard to economy, efficiency, effectiveness and environmental effects of those expenditures?	Conduct audits of: • management of the environmental and sustainable development issues in the Great Lakes and St. Lawrence River Basin including water management, species and habitats, fisheries and agriculture Follow up previous audits of: • climate change • energy efficiency
Studies	Conduct a study of: • social dimension of sustainable development
Petitions	Monitor on behalf of the Auditor General

successfully, and present them to the House of Commons in the spring of 1999. An assessment of those targets is presented in Chapter 1 of this Report. This year, 45 percent of departments presented targets. Half of those targets now have clearly stated criteria or measures of success and an expected completion date. But departments continue to use terms like "enhance", "improve", "promote", "assist" and "facilitate" rather than specifying what is to be achieved and when.

Audits of the management of environmental and sustainable development issues

61. Through its own strategy, the Office of the Auditor General is working to make sustainable development integral to what we do as an Office, and how we do it. Over the last year, the Auditor General has conducted a number of audits with an important environmental or sustainable development component (see Appendix B).

62. Over the next year, we will be looking at other issues:

- **Management of environmental and sustainable development issues in the Great Lakes and St. Lawrence River Basin.** The 2001 Report will focus on the federal government's management of issues in the Great Lakes and St. Lawrence River Basin. The Basin constitutes the largest freshwater system in the world. It has provided energy, drinking water, transportation, fish, and agricultural and recreational opportunities for people on both sides of the border for centuries. It is also one of the most heavily populated and industrialized regions in North America. The audit work will concentrate on aspects such as water, species and their habitats, fisheries and agriculture. It will examine issues like performance measurement, partnerships, accountability, and information for decision making.

Our 2001 Report will focus on the federal government's management of environmental and sustainable development issues in the Great Lakes and St. Lawrence River Basin.

- **The social dimension of sustainable development.** To date, most of our work has focussed on the environmental and economic dimensions of sustainable development. The social dimension is also important but is not understood as well. Over the next year, we will review current thinking on the social dimension of sustainable development and will present the results to Parliament in 2001. This study will serve as the basis for establishing our future work program in this area.

The petition process

63. Amendments to the *Auditor General Act* in 1995 created the position of Commissioner of the Environment and Sustainable Development and required ministers to prepare sustainable development strategies. The amendments also established a petition process — a vehicle for Canadians to register their concerns about specific environmental and sustainable development issues that fall under federal jurisdiction, and to obtain a response to those concerns.

64. Under the process, a Canadian resident can send a petition to the Auditor General. The petition is then forwarded to the appropriate federal minister for response. The minister has 120 days to respond to the petitioner.

65. The number of petitions fell during the year ended 31 March 2000. Two new petitions were received and sent to ministers for a response, compared with 9 in 1999 and 10 in 1998. One of the new petitions dealt with the use of toxic substances and the other with information on sustainable development in Canada's national parks. A third petition was received late in 1998 and responded to in early 1999. Appendix C provides information on the nature and status of the petitions. Over the next year, we will conduct a review of the petition process to determine how it might be strengthened.

Conclusion

66. This year's Report maintained our focus on the challenges the federal government faces in managing its environmental and sustainable development agenda. Partnerships have figured prominently in the federal government's approach. In the past decade, numerous commitments have been made that require co-operation and co-ordination across departments, between governments and with other partners if objectives are to be met.

67. In earlier reports, we have identified persistent problems with the federal government's management of key issues like climate change, toxic substances and biodiversity. Problems included unclear objectives, roles and responsibilities; poor measurement and reporting of performance; and inadequate provision for review and audit. And the commitments made to Canadians were not being met.

68. In looking at issues like smog, acid rain, protected areas, biotechnology and greening of government operations, we identified the key ingredients for building and sustaining effective working relationships. Those ingredients can serve as a basis for assessing current initiatives, for modifying them, and for designing new ones.

Partnerships have figured prominently in the federal government's approach.

Appendix A

Auditor General Act — Excerpts

An Act respecting the Office of the Auditor General of Canada and sustainable development monitoring and reporting

INTERPRETATION

Definitions

2. In this Act,

"appropriate Minister"

"appropriate Minister" has the meaning assigned by section 2 of the *Financial Administration Act*;

"category I department"

"category I department" means

(a) any department named in Schedule I to the *Financial Administration Act*,

(b) any department in respect of which a direction has been made under subsection 24(3), and

(c) any department, as defined in the *Financial Administration Act*, set out in the schedule;

"Commissioner"

"Commissioner" means the Commissioner of the Environment and Sustainable Development appointed under subsection 15.1(1);

"sustainable development"

"sustainable development" means development that meets the needs of the present without compromising the ability of future generations to meet their own needs;

"sustainable development strategy"

"sustainable development strategy", with respect to a category I department, means the department's objectives, and plans of action, to further sustainable development.

DUTIES

Examination

5. The Auditor General is the auditor of the accounts of Canada, including those relating to the Consolidated Revenue Fund and as such shall make such examinations and inquiries as he considers necessary to enable him to report as required by this Act.

Idem

6. The Auditor General shall examine the several financial statements required by section 64 of the *Financial Administration Act* to be included in the Public Accounts, and any other statement that the President of the Treasury Board or the Minister of Finance may present for audit and shall express his opinion as to whether they present fairly information in accordance with stated accounting policies of the federal government and on a basis consistent with that of the preceding year together with any reservations he may have.

Annual and additional reports to the House of Commons

7. (1) The Auditor General shall report annually to the House of Commons and may make, in addition to any special report made under subsection 8(1) or 19(2) and the Commissioner's report under subsection 23(2), not more than three additional reports in any year to the House of Commons

(a) on the work of his office; and,

(b) on whether, in carrying on the work of his office, he received all the information and explanations he required.

Idem

(2) Each report of the Auditor General under subsection (1) shall call attention to anything that he considers to be of significance and of a nature that should be brought to the attention of the House of Commons, including any cases in which he has observed that

(a) accounts have not been faithfully and properly maintained or public money has not been fully accounted for or paid, where so required by law, into the Consolidated Revenue Fund;

(b) essential records have not been maintained or the rules and procedures applied have been insufficient to safeguard and control public property, to secure an effective check on the assessment, collection and proper allocation of the revenue and to ensure that expenditures have been made only as authorized;

(c) money has been expended other than for purposes for which it was appropriated by Parliament;

(d) money has been expended without due regard to economy or efficiency;

(e) satisfactory procedures have not been established to measure and report the effectiveness of programs, where such procedures could appropriately and reasonably be implemented; or

(f) money has been expended without due regard to the environmental effects of those expenditures in the context of sustainable development.

STAFF OF THE AUDITOR GENERAL

Appointment of Commissioner

15.1 (1) The Auditor General shall, in accordance with the *Public Service Employment Act*, appoint a senior officer to be called the Commissioner of the Environment and Sustainable Development who shall report directly to the Auditor General.

Commissioner's duties

(2) The Commissioner shall assist the Auditor General in performing the duties of the Auditor General set out in this Act that relate to the environment and sustainable development.

SUSTAINABLE DEVELOPMENT

Purpose

21.1 The purpose of the Commissioner is to provide sustainable development monitoring and reporting on the progress of category I departments towards sustainable development, which is a continually evolving concept based on the integration of social, economic and environmental concerns, and which may be achieved by, among other things,

(a) the integration of the environment and the economy;

(b) protecting the health of Canadians;

(c) protecting ecosystems;

(d) meeting international obligations;

(e) promoting equity;

(f) an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of different environmental and natural resource options;

(g) preventing pollution; and

(h) respect for nature and the needs of future generations.

Petitions received

22. (1) Where the Auditor General receives a petition in writing from a resident of Canada about an environmental matter in the context of sustainable development that is the responsibility of a category I department, the Auditor General shall make a record of the petition and forward the petition within fifteen days after the day on which it is received to the appropriate Minister for the department.

Acknowledgement to be sent

(2) Within fifteen days after the day on which the Minister receives the petition from the Auditor General, the Minister shall send to the person who made the petition an acknowledgement of receipt of the petition and shall send a copy of the acknowledgement to the Auditor General.

Minister to respond

(3) The Minister shall consider the petition and send to the person who made it a reply that responds to it, and shall send a copy of the reply to the Auditor General, within

(a) one hundred and twenty days after the day on which the Minister receives the petition from the Auditor General; or

(b) any longer time, where the Minister personally, within those one hundred and twenty days, notifies the person who made the petition that it is not possible to reply within those one hundred and twenty days and sends a copy of that notification to the Auditor General.

Multiple petitioners

(4) Where the petition is from more that one person, it is sufficient for the Minister to send the acknowledgement and reply, and the notification, if any, to one or more of the petitioners rather than to all of them.

Duty to monitor

23. (1) The Commissioner shall make any examinations and inquiries that the Commissioner considers necessary in order to monitor

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before the House of Commons under section 24; and

(b) the replies by Ministers required by subsection 22(3).

Commissioner's report

(2) The Commissioner shall, on behalf of the Auditor General, report annually to the House of Commons concerning anything that the Commissioner considers should be brought to the attention of that House in relation to environmental and other aspects of sustainable development, including

(a) the extent to which category I departments have met the objectives, and implemented the plans, set out in their sustainable development strategies laid before that House under section 24;

(b) the number of petitions recorded as required by subsection 22(1), the subject-matter of the petitions and their status; and

(c) the exercising of the authority of the Governor in Council under any of subsections 24(3)to (5).

Submission and tabling of report

(3) The report required by subsection (2) shall be submitted to the Speaker of the House of Commons and shall be laid before that House by the Speaker on any of the next fifteen days on which that House is sitting after the Speaker receives it.

Strategies to be tabled

24. (1) The appropriate Minister for each category I department shall cause the department to prepare a sustainable development strategy for the department and shall cause the strategy to be laid before the House of Commons

(a) within two years after this subsection comes into force; or

(b) in the case of a department that becomes a category I department on a day after this subsection comes into force, before the earlier of the second anniversary of that day and a day fixed by the Governor in Council pursuant to subsection (4).

Updated strategies to be tabled

(2) The appropriate Minister for the category I department shall cause the department's sustainable development strategy to be updated at least every three years and shall cause each updated strategy to be laid before the House of Commons on any of the next fifteen days on which that House is sitting after the strategy is updated.

Governor in Council direction

(3) The Governor in Council may, on that recommendation of the appropriate Minister for a department not named in Schedule I to the *Financial Administration Act*, direct that the requirements of subsections (1) and (2) apply in respect of the department.

Date fixed by Governor in Council

(4) On the recommendation of the appropriate Minister for a department that becomes a category I department after this subsection comes into force, the Governor in Council may, for the purpose of subsection (1), fix the day before which the sustainable development strategy of the department shall be laid before the House of Commons.

Regulations

(5) The Governor in Council may, on the recommendation of the Minister of the Environment, make regulations prescribing the form in which sustainable development strategies are to be prepared and the information required to be contained in them.

Appendix B

Environmental and Sustainable Development Work by the Office of the Auditor General, 1999

Reference	Key Conclusions
Fisheries and Oceans — Managing Atlantic Shellfish in a Sustainable Manner, Chapter 4	In October 1997, we reported on problems associated with the Department's management of the Atlantic groundfish fisheries. In the current audit, we found that many of these problems also exist in the Department's management of the Atlantic shellfish fisheries. For example, we noted increases in harvesting capacity and the encouragement of increased fisher participation through open access licensing in the shellfish fisheries. In addition, we found weaknesses in the information used in making resource decisions, and gaps in monitoring, control and surveillance. The full impact of these problems is not obvious, as most shellfish fisheries are currently recording high landed values. However, in our view these are significant concerns that must be addressed to ensure that the shellfish fisheries are managed in a sustainable manner. (paragraph 4.1)
The Atlantic Groundfish Strategy Follow-up, Chapter 8	We believe the government's efforts to implement the recommendations in our October 1997 Report Chapter 16 on The Atlantic Groundfish Strategy (TAGS) have been satisfactory. New fishery restructuring and adjustment measures are being implemented. In contrast to our observations of 1997, the eligibility criteria for the new measures are clear, logical and applicable. The accountability framework established for the measures corrects the shortcomings we had identified in TAGS: it clearly defines the responsibilities of the organizations involved, sets out an overall strategic plan and provides for a formal co-ordination mechanism. (paragraphs 8.1 and 8.2)
National Defence — Hazardous Materials: Managing Risks to Employees and the Environment, Chapter 13	Our audit at 10 Canadian Forces bases found widespread, frequent and recurring instances in which National Defence did not meet the legal and policy requirements that govern hazardous materials. Such instances may put employees and the environment at increased risk. The Department has made efforts to improve its management of hazardous materials. While there are few clear measures of the impact of these efforts, we did find that injury rates for hazardous material injuries that require at least one day off work declined by more than half from 1993 to 1997. Nevertheless, not all lapses in compliance result in accidents — some could damage employee health or the environment over the long term. (paragraphs 13.1 and 13.2)
Canada Infrastructure Works Program — Phase II and Follow-up of Phase I Audit, Chapter 17	The follow-up to our 1996 audit chapter indicates limited progress overall in addressing the range of deficiencies we identified in Phase I of the Canada Infrastructure Works Program. The main area of improvement was in undertaking environmental assessments before federal approval of infrastructure projects. However, weaknesses remained in the identification and monitoring of mitigation measures where those were required. (paragraphs 17.88 to 17.94)
Fisheries and Oceans — Pacific Salmon: Sustainability of the Fisheries, Chapter 20	The Pacific salmon fisheries are in trouble. Catches have declined overall, but the commercial catch has plummeted. The long-term sustainability of the fisheries is at risk because factors like overfishing, habitat loss, and declining ocean productivity have eroded the resource base. The result is a fisheries management crisis that has cast a cloud of uncertainty over the future of the salmon fisheries. Salmon fishing will continue, but more stringent controls are needed in the short term to ensure that salmon survive for the benefit of future generations. (paragraph 20.1)

Appendix C

Summary of Petitions Received and Ministers' Responses

Subject of Petition*	Petitioner:	Federal Department:	Date of Petition	Date Response Received	Response
19. **Enforcement.** The petitioner requested an investigation of the non-enforcement of environmental protection legislation by the federal departments of Fisheries and Oceans and Environment concerning past and ongoing operations of the Pine Falls Paper Company in Pine Falls, Manitoba.	Alice Chambers	Fisheries and Oceans	30 November 1998	23 April 1999	The Minister of Fisheries and Oceans provided information on the Canadian Coast Guard inspection of Pine Falls Paper Company's bridges. The Canadian Coast Guard determined that 14 of the company's 26 bridges that are over navigable waters do not pose a hazard to navigation and no further action is warranted. Environmental assessments were required for 9 of the bridges and have been conducted and approved, with the exception of the ongoing assessment of the Manigotagan Bridge. Given the timeframe between the construction of these bridges and the point at which Fisheries and Oceans became aware of any potential impacts to fish habitat, it would be difficult to prove that harm to fish habitat took place at the sites. Fisheries and Oceans hopes to address any future potential fish habitat impacts associated with these bridges through identified mitigation measures for maintenance and decommissioning.

* Petitions 1 to 7 were included in our 1998 Report and 8 to 18 in our 1999 Report.

Subject of Petition	Petitioner:	Federal Department:	Date of Petition	Date Response Received	Response
		Environment Canada		21 April 1999	The Minister of the Environment referred to a previous letter from Environment Canada to the petitioner explaining why charges were not laid against the mill under the *Fisheries Act*. That letter explained that the Environmental Effects Monitoring requirements were being implemented for the first time in Canada. Problems at the Pine Falls Paper Mill were not solely attributable to the company. Government participants had to take some responsibility. As a result, it was decided that a lengthy legal process would be unlikely to succeed and a poor use of taxpayers money. Instead, the focus was on resolving all administrative and technical problems. The Minister explained that the Department believed that compliance with the Pulp and Paper Effluent Regulations could be achieved with the installation of a secondary treatment system. The Minister also explained that prosecution for one of the company's spills was warranted while in other cases it was not, based on the nature of the violation, the effectiveness in achieving the desired result, and consistency in enforcement.

Subject of Petition	Petitioner:	Federal Department:	Date of Petition	Date Response Received	Response
20. **Toxic Substances.** The petitioner expressed concerns about the use of pesticides, herbicides and fertilizers on ginseng farms throughout central British Columbia. The petitioner was concerned about the impact of these products on the land, the river systems and the health of farm workers and others indirectly related to the farms.	Nelson A. Riis, Member of Parliament for Kamloops, Thompson & Highland Valleys on behalf of the residents of the Kamloops, British Columbia region.	Health Canada	25 August 1999	27 October 1999	The Minister of Health assured the petitioner that Canada has one of the most stringent pesticide regulatory systems in the world. Pest control products are regulated under the *Pest Control Products Act* and registered by the Pest Management Regulatory Agency (PMRA). Products are registered only if sufficient scientific data have been provided to assess the safety and value of the product. The assessment must conclude that the human health and environmental risks associated with the prescribed use of the product are acceptable, and that the product is effective for its intended use. Products registered for application on ginseng have been assessed for their safety and value and can be employed for their intended use. No undue harm to human health and the environment will occur when the label directions are carefully read, understood and adhered to. The PMRA has recently completed a program directed at ginseng growers that was intended to familiarize them with the pesticide regulatory system and to inspect for pesticide use. Recent inspections showed that ginseng growers use the proper products and are aware of the importance of careful and judicious use of pesticides. Worker exposure to pest control products during application, and to residues upon re-entry into treated fields, is also considered in the assessment of control products. The PMRA is currently involved in two initiatives related to re-entry exposure.

Subject of Petition	Petitioners	Federal Departments	Date of Petition	Date Response Received	Response
21. **Sustainable Development.** The petitioner expressed concerns that Parks Canada has not developed information on the three dimensions of sustainable development — economic, environmental and social. The petitioner alleged that the Banff-Bow Valley Study, the Jasper Management Plan and the Jasper Community Plan lack social and economic data. The petitioner also alleged that the National Parks Revenue Policy, which states that science is to be funded only from appropriations, is ignored within Jasper National Park with moneys being directed to science programs rather than the maintenance of capital assets and visitor services.	Pat Crowley	Parks Canada	10 January 2000	Pending	

Appendix D

Panel of Advisors to the Commissioner of the Environment and Sustainable Development

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Implementing Sustainable Development Strategies: Year Two

Work in Progress

Chapter 1 – Main Points

1.1 The information that most departments provided in their second annual progress reports on sustainable development strategies continued to fall well short of the information specified in the Treasury Board's Guideline for the Preparation of Departmental Performance Reports to Parliament. Thus, parliamentarians, Canadians and other stakeholders will find it difficult to judge whether the strategies are on track or whether corrective action is required. We expect that the quality of reporting will improve as departments adopt a more systematic approach to managing strategy implementation.

1.2 Overall, strategy implementation seems to be progressing. Based on our assessment of the information reported by departments in 1999, they met about 20 percent of the commitments set out in the sustainable development strategies, compared with 11 percent in 1998. Departments are also working on their management practices for implementing the strategies. Last year we reported that, on average, departments had established about one third of the management practices reflected in the ISO 14001 management standard, which is a benchmark of good practice. This year, on average, the six departments we examined were applying about half of those practices.

1.3 However, in four of the six departments, the management practices do not yet provide reasonable assurance that their strategies will be implemented consistently and achieve the intended results. We continue to believe that departments should establish and apply a management systems approach to support the implementation of their strategies.

Background and other observations

1.4 In 1997, 28 federal government departments and agencies tabled their first sustainable development strategies in the House of Commons. Since then, they have been working to implement their strategies. Departments are required to report annually to the House on their progress. This chapter provides the Commissioner's second annual assessment of that progress.

1.5 In his 1998 report, the Commissioner recommended that departments establish clear and measurable targets that they, parliamentarians and the public could use to judge whether or not the strategies are being implemented successfully. This year we reviewed the departments' revised targets to determine whether they had clearly stated the criterion or measure of success for each target and indicated an expected completion date. About 50 percent of the revised targets include a clearly stated criterion or measure of success and an expected completion date. Only 45 percent of departments included targets and performance indicators in their performance reports.

1.6 Last year we examined the management practices that six departments were following to implement their sustainable development strategies. As a benchmark of good practice, we used the ISO 14001 standard for environmental management systems. This year, using the same benchmark, we assessed the management practices of another six departments. In four of them we found significant gaps between their practices and the ISO standard. These four departments are still in the early stages of establishing a systematic approach to strategy implementation. They have not yet adopted a systematic approach to identifying their priorities, defining management expectations, assigning accountability for results at lower levels in the organization and identifying related training needs, or performing the self-assessments that would facilitate steady improvement.

Greening Government Operations

When Will the Government Measure Up?

Chapter 2 – Main Points

2.1 A decade of commitments to green government operations. Since 1990, the federal government has made commitments to Canadians that it would green its operations. Yet, a decade later, there is a lack of rudimentary information about government's vast operations, the costs of which are likely more than $400 million annually for water, energy and waste disposal. We found that the government does not have complete and accurate data on the annual cost of running its buildings and on the environmental impacts of its operations. Given the magnitude of the dollars involved, we believe it is important that the government know its annual heating, lighting and water bills.

2.2 Parliament ought to be concerned. Departments embarked on the journey toward implementing an environmental performance measurement system in 1997, yet they are making uneven and slow progress. No department has fully implemented all the elements of the performance measurement framework. Parliament ought to be concerned about the current rate of implementation.

2.3 Canadians will not get a consolidated performance report in the foreseeable future. Given the way the government has chosen to manage its environmental agenda, Canadians will not be getting a consolidated performance report in the foreseeable future. We found very limited use of common performance indicators to measure and report on departmental progress in greening operations. There is also a lack of clear focus for developing common environmental reporting standards. Leadership is fragmented. No organization has been given the responsibility, or sees itself as the lead, for establishing a consistent, consolidated and coherent federal approach to reporting environmental performance.

Background and other observations

2.4 In the October 1999 Speech from the Throne, the government reiterated its commitment to greening operations and to making itself a model of environmental excellence. As the single largest business and employer in Canada, the federal government is in a position to lead by example. To be a model of environmental excellence, the government has to demonstrate to Parliament and Canadians that it has its own house in order. Parliament needs an overall picture of the results that have been achieved.

2.5 The government needs to take a systematic approach to greening its operations to effectively fulfil its stewardship responsibilities, contribute to sustainable development goals, ensure compliance with regulations, and meet international commitments. Full implementation of an environmental performance system will go a long way toward satisfying this need.

2.6 This audit is part of a long-term project that began three years ago. The objective of the audit this year was to provide Parliament with an assessment of the status of departmental progress in implementing environmental performance measurement for government operations. We expect that the results of this audit will assist departments in implementing environmental performance measurement for government operations and improve the information available to departmental decision makers and to Parliament.

Departments responded jointly through the Privy Council Office, indicating their support for the recommendations in the chapter. Interdepartmental discussion has begun on the appropriate accountability framework and action plan necessary to contribute to more uniform reporting of progress. Public Works and Government Services Canada, in its response, expressed its commitment to working with other departments to improve measures for greening tenant department operations in both Crown-owned and Crown-leased facilities.

Government Support for Energy Investments

Chapter 3 – Main Points

3.1 We undertook this study to give Parliament comprehensive information on the support provided by government for energy investments and to determine whether this support favours the non-renewable energy sector. We were particularly interested in support through the tax system because it is less transparent than direct support. We also wanted to explore reasons why energy from renewable sources, other than large-scale hydro-electric projects, makes up a small portion of Canada's energy mix. We sought to determine whether tax incentives are a major contributor to this situation.

3.2 Overall, we found that with a few exceptions, federal government support today for energy investments, including support through the tax system, does not particularly favour the non-renewable sector over the renewable sector. We also found that in the past, governments have intervened in energy markets for various reasons through direct spending, regulations and tax incentives. Most of the federal spending and tax incentives have been for non-renewable resources, the predominant source of energy in Canada.

3.3 All forms of energy are competing for investment dollars against many other investment opportunities. Investments with higher rates of return, established markets and good track records are the ones that attract investors. Most investors we surveyed find that many renewable energy investments do not currently have these features. As well, the payback period is often too long for investments in renewable energy and energy efficiency to make them the preferred choice.

3.4 The federal government stated in its 1996 Renewable Energy Strategy that it wants to increase investments in renewable energy. It has also said for many years that it wants Canadians to use energy more efficiently. Given the barriers we have identified, the federal government may wish to consider developing new strategies and approaches to accomplish its stated objectives for investments in renewable energy and energy efficiency.

Background and other observations

3.5 In December 1997, Canada and 160 other nations negotiated the Kyoto Protocol, an agreement on climate change to reduce emissions of six important greenhouse gases, including carbon dioxide. (The main source of human-induced greenhouse gas emissions in Canada is the production and consumption of fossil fuels, such as oil, natural gas and coal.) For its part, Canada committed to reducing its emissions to six percent below 1990 levels by 2008–2012. But Canada's emissions were already 13 percent above 1990 levels by 1997 and are expected to keep growing. Unless Canada takes new measures, Natural Resources Canada estimates that Canada will actually have to reduce emissions by at least 26 percent from their forecast levels to meet the Kyoto target.

3.6 For the purpose of this study, "non-renewable sources of energy" included oil, natural gas and coal (which are fossil fuels) and nuclear power. "Renewable sources of energy" included water (large-scale and small-scale hydro-electric projects), wind, the sun, the photovoltaic cell (energy produced by exposing to light two dissimilar materials), biomass (plant materials and animal waste), ethanol, geothermal power (heat energy produced in the earth), and waves or tides.

3.7 Governments have used the tax system to encourage exploration for and development of various sources of energy. Most of the federal tax provisions that exist today accelerate the write-off of an expense for tax purposes. This means that the taxpayer reduces current taxes but pays higher taxes later. Accelerated write-offs are a benefit mainly because of the "time value" of money. Investors who can reduce current taxes are able to achieve a higher rate of return on their investment and have more cash for other investments.

3.8 An adequate rate of return on investment was the factor most frequently mentioned by our survey respondents in assessing the potential of an investment project. As the International Energy Agency pointed out, many renewable energy projects do not yet provide an adequate rate of return to make them a desirable investment. Three reasons for this are markets are difficult to enter, renewable energy products generally cost more than non-renewable ones, and payback periods are often longer.

Smog

Our Health at Risk

Chapter 4 – Main Points

Smog poses a serious threat to Canadians

4.1 Over the last decade, the federal government has stated repeatedly that Canada's smog problem is a major public health issue and one that poses a serious threat to the environment. Its most significant impact is the adverse effects it has on the health of Canadians, particularly the most vulnerable members of society — the elderly, our children and those with heart disease and lung and other respiratory diseases. Even healthy adults are vulnerable to the adverse effects of smog.

4.2 The federal government estimates that air pollution can be linked to 5,000 premature deaths each year in 11 major Canadian cities. This is a relatively large number of deaths when compared with some of the other involuntary risks that Canadians face. In addition, a far larger number of Canadians experience less serious but more widespread impacts that can place a significant burden on our health care system. For example, exposure to smog can result in respiratory or other problems that can interfere with quality of life and physical performance. Other potential effects include increased use of medication, more visits to doctors or emergency rooms and even admissions to hospital.

4.3 Smog also affects Canada's agricultural and forestry sectors. Millions of dollars are lost each year in the agricultural sector due to the impact of common air pollutants on crops.

4.4 In a 1999 survey conducted for Health Canada, 24 percent of Canadians identified air pollution as their provinces' most serious environmental issue. In addition, 61 percent said they are "very concerned" about air quality problems. While many Canadians are aware that smog is bad for their health and their environment, there is a need to improve their understanding of the problem and what they can do about it.

No time for complacency

4.5 While there have been downward trends in some pollutants commonly found in outdoor air, trends now appear to be levelling off or even increasing. Past improvements in air quality are slowly being eroded by increased emissions as a result of greater consumption of energy.

4.6 The federal government has stated that current scientific knowledge presents compelling evidence of the need for urgent action on smog. Federal strategies on air pollution were originally based on the belief that there were lower limits at which the main pollutants in smog were safe. However, recent research has been unable to identify safe levels of ozone or particulate matter.

4.7 Environment Canada expects that air quality will continue to deteriorate unless governments, industry and individual Canadians make a concerted effort to reduce smog.

Starting out on the right foot — but failing to take the next steps

4.8 In 1990, the Canadian Council of Ministers of the Environment (CCME) endorsed a three-phase national plan to reduce levels of pollutants. The plan focussed on nitrogen oxides (NOx) and volatile organic compounds (VOC). Both of these lead to the formation of ozone, a major component of smog. The national plan's objective was to "fully resolve" the ozone problems in Canada by 2005.

4.9 We believe that the 1990 NOx/VOC Management Plan represented a major achievement by the federal, provincial and territorial governments and provided sound strategic direction for addressing Canada's smog problem.

4.10 However, after endorsing the Plan the partners never reached agreement on the details of a framework for implementing it. The Plan evolved over the past 10 years without many of the key elements of good management.

4.11 Environment ministers originally agreed to negotiate federal-provincial partnership agreements within one year, outlining who would do what by when. When no such agreements were prepared, the Plan was destined to fail. An appropriate accountability regime was never put in place to clarify the roles, responsibilities and expected performance of each level of government. As a consequence, it is not clear whom the public and Parliament can hold to account should the Plan fail.

4.12 Although the 1990 Plan was never implemented as originally envisioned, the federal government did most of what it had said it would do under the first of the Plan's three phases. However, the federal contribution to reducing emissions was expected to be modest compared with the size of the problem. Under the Plan, the efforts of others were supposed to achieve the bulk of emission reductions.

4.13 Environment Canada failed to provide the public and Parliament with meaningful, comprehensive and timely information about action on the promises made to Canadians in 1990 and on the results of national efforts. The lack of transparent information means that the public and Parliament cannot determine whether Canada is addressing its smog problem at a reasonable pace.

4.14 The federal government acknowledges that despite years of national effort, progress has been slower than planned and the original target date will likely not be met. Moreover, new pollution concerns must be addressed and levels of smog-causing pollutants significantly reduced. Environment Canada has commented publicly on the need for urgent high-priority action to address this chronic and stubborn problem.

Where to go from here?

4.15 No one level of government and no one industry can resolve the smog problem alone. There is no one solution; dealing with smog will require a long-term, concerted effort by all Canadians. Arrangements must be developed that will work in this difficult context. Canada will need strong leadership from the federal government to encourage co-operative action in all sectors of society.

4.16 As the federal leader in protecting Canada's air quality, Environment Canada has a responsibility that goes beyond its own smog-reduction activities and its co-ordination of federal activities. It is also responsible for facilitating federal/provincial/territorial collaboration and working with its partners to develop effective national strategies and plans.

4.17 The federal government has identified the importance of using a broad range of tools to reduce smog. For the most part, however, it has relied on the voluntary co-operation of others and has used regulatory instruments only selectively. It needs to develop a comprehensive federal approach that fully addresses the sources of smog-causing pollutants.

4.18 The approach used for federal/provincial/territorial collaboration has proved ineffective at achieving the results promised to Canadians under the 1990 Plan. It remains to be seen whether the new Canada-Wide Standards process under the 1998 Canada-Wide Accord on Environmental Harmonization will be more effective. Whether the new process will establish clear accountability for results and transparent information to the public and Parliament also remains to be seen.

Background and other observations

4.19 The smog problem is difficult and complex. Smog is made up of various pollutants from many different sources. It crosses borders and affects different people in different ways. Although smog is defined by its main components — ozone and particulate matter — the "basket" of pollutants that contribute to the formation of smog also includes nitrogen oxides, volatile organic compounds, sulphur dioxide and carbon monoxide.

4.20 The air pollutants that cause smog today are largely by-products of industrial activities and the burning of fossil fuels (oil, natural gas and coal). Many of the solutions to the smog problem will require Canadians to change the way they produce and use energy.

4.21 Environment Canada has taken the federal and national lead, and represents Canada at the international level. In Canada, however, no jurisdiction has sole authority to regulate or control all aspects of smog reduction. While the federal government works to reduce smog nationally, complementary efforts of the provinces, territories and municipalities have a major impact on the pace of progress.

4.22 To help assess progress in the future, the federal government needs to work with the provinces and territories to identify and prioritize the requirements of the national air pollutant monitoring network. As part of any future commitments, they need to determine their respective roles and responsibilities for maintaining and enhancing the network.

4.23 Ten years after the federal, provincial and territorial environment ministers identified smog as a serious threat to public health and the environment, their governments are still developing national strategies and plans for combating smog. They are considering new standards for ozone and particulate matter, but the proposed targets are far in the future.

4.24 While finding solutions to smog has often seemed beyond Canada's reach, there is cause for hope. Canada has taken action to reduce some of the components of smog and has had some success in improving air quality in general. Canadian governments and industry have demonstrated that they can tackle difficult problems of air pollution, and similar results should be possible with smog.

The response of Environment Canada is included in this chapter. The Department agrees that smog is an important public health concern that requires further action and sustained investment. It also agrees that sound management principles should be incorporated into future management arrangements under the Canada-Wide Standards for Particulate Matter and Ozone. Environment Canada is committed to providing meaningful and timely information on performance expectations and results.

Partnerships for Sustainable Development

Overview

Chapter 5 – Main Points

5.1 Some of the most pressing challenges facing governments today cut across departmental mandates and political jurisdictions. To address those challenges, governments look increasingly to partnering arrangements for policy development and program delivery.

5.2 Managing these working relationships — within governments, between governments and with other partners — has proved to be a particular challenge. For effective collaborative arrangements — where partners work together to meet common objectives — certain attributes are desirable. Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of a framework for those arrangements. Participants in such arrangements themselves identified five key success factors: clear and realistic objectives and expectations for results; shared or complementary goals; effective and committed individuals; clear benefits for participating organizations; and senior management interest, support and commitment.

5.3 To manage their working relationships effectively, departments need to take a broader view of what constitutes success, giving greater weight to accountability. It is not that people involved do not know how to develop and maintain working relationships and what is needed for accountability. Rather, the challenge is to turn knowledge into action. The Privy Council Office and the Treasury Board Secretariat have important roles to play in ensuring that the principles and elements of a good working relationship are understood and applied by departments.

Background and other observations

5.4 In areas of shared responsibility — like protecting the environment and promoting sustainable development — co-operation and co-ordination are essential to meeting common policy objectives. Even when not essential, they are desirable — partnerships can also improve program efficiency and effectiveness. Without co-operation and co-ordination, relevant expertise and viewpoints may not be appropriately integrated into decision making. Problems may not be well defined, priorities may not be well developed and policies may not be implemented.

5.5 This chapter — along with the following three chapters — looks at building and sustaining effective working relationships to protect the environment and promote sustainable development. Chapter 6 reports on working arrangements within the federal government, Chapter 7 on federal-provincial relationships and Chapter 8 on public-private partnerships. These chapters together present the results of 17 case studies of organizations working co-operatively to meet common objectives in areas like biotechnology, acid rain, forestry and mining.

A joint response by the Privy Council Office and the Treasury Board Secretariat is included in this chapter. They agree with our recommendation and note that initiatives are under way to strengthen horizontal policy development and issues-management capacity.

Working Together in the Federal Government

Chapter 6 – Main Points

6.1 Canada's unique approach to achieving sustainable development demands that federal departments work well with one another. They can use a variety of mechanisms, ranging from the creation of new organizations to cost-sharing agreements to voluntary networks for information exchange. Through six case studies, we examined the key factors affecting the success of such mechanisms.

6.2 We found that departments need to define clearly "who does what". Key problem areas include unclear objectives, poorly defined responsibilities, unclear accountability and weak dispute resolution. Critical success factors include managing the effects of participant turnover, ensuring that departments have the incentives to collaborate, and paying sufficient attention to the results of monitoring and evaluation to learn from past experience.

6.3 Good interdepartmental co-ordination is limited by departments' inability to compel other departments to act, except through persuasion and negotiation. The primary central agencies, the Privy Council Office and the Treasury Board Secretariat, may have a crucial role to play in achieving a "Government of Canada" perspective.

Background and other observations

6.4 The first case study we considered, the recently renewed Canadian Biotechnology Strategy, involves over 20 departments and agencies and the creation of a new secretariat. It was built on a successful consultation effort, but now faces issues of unclear roles and responsibilities, increased bureaucracy and administrative weaknesses. Concrete action plans and an evaluation plan have not yet been made public.

6.5 Natural Resources Canada and Indian and Northern Affairs Canada are promoting forestry-based economic opportunities for First Nations communities. Clear objectives and a flexible management structure have supported the program's success. For example, other organizations contributed $21 million beyond initially planned levels. We identified the need for improved co-ordination with other departments and for better monitoring of results.

6.6 The federal government has committed to taking environmental concerns into account in its purchases of over $14 billion annually in goods and services. A centrally co-ordinated approach is needed to ensure that this objective can be achieved at the best value for taxpayers. Despite repeated attempts to co-ordinate over the last decade, departmental policies are missing or inconsistent, efforts are being duplicated, and roles and responsibilities are not clear. We believe the Treasury Board Secretariat needs to play a central role in co-ordination.

6.7 Canada has played a key role in international negotiations to regulate the transboundary movement of living genetically modified organisms. An interdepartmental working group successfully prepared a negotiating position in the face of very high stakes, uncertain impacts, and conflicting perspectives. The departments went through a long and difficult process in which disputes were not always effectively resolved. In our view, the federal government needs to take a strategic approach to managing the tension between the trade and environmental agendas.

6.8 Led by Environment Canada, departments worked together and with other stakeholders to assess the aquatic effects of effluent from metal mines. Solid planning, a neutral secretariat, good dispute resolution and adequate resources helped ensure a successful outcome. This success was built on past experience with pulp and paper regulations.

6.9 In our last case study, we examined co-ordination among departments with respect to their sustainable development strategies. In the first round of strategies, departments did not adequately co-ordinate their content, shared commitments and consultation processes. The Interdepartmental Network on Sustainable Development Strategies is facilitating improved information exchange and co-ordination among departments for the second round. The effectiveness of the Network is limited, however, by its voluntary nature, unclear reporting relationships and high turnover of participants.

The departments' and agencies' responses to our recommendations are included in the chapter. They agree with the recommendations and describe actions to deal with some of them.

Co-operation Between Federal, Provincial and Territorial Governments

Chapter 7 – Main Points

7.1 The shared nature of environmental jurisdiction requires close co-operation between federal, provincial and territorial governments. Successful co-operation agreements depend on a mix of subjective and objective considerations. The case studies in this chapter demonstrate the importance of relationships where partners build and maintain trust between them. They show that leadership and commitment from all parties involved are essential as well as public and political support. Finally, they confirm that partners need the discipline to follow all the necessary steps during the life cycle of an agreement. The key to a successful co-operation agreement is meeting all or most of these conditions.

7.2 Before entering into an agreement, prospective partners need to be convinced that the issue is important and that a partnership is likely to be the best way of dealing with it. They need to recognize their respective jurisdictions and take into account the ability of their potential partners to deliver desired results. As well, they need to consult and involve all the organizations whose commitment is essential to achieving the agreement's objectives. If the partners do not meet these conditions, they could still reach an agreement but likely would not accomplish desired results.

7.3 In designing the agreement, accountability issues between the partners become important. Does the agreement specify clear, common or complementary objectives, time frames and expected results as well as clear roles and responsibilities? Are there appropriate provisions for co-ordinating, monitoring and reporting performance as well as evaluating and modifying the agreement, if necessary?

7.4 During the implementation of the agreement, partners have to keep their commitments. Each partner needs to produce an early action plan that defines clear roles and responsibilities within its own organization and that sets targets and time frames. Partners also need to integrate the agreement's objectives into their policies and operations. Finally, partners must co-ordinate activities, monitor results and submit timely and transparent progress reports.

7.5 Our case studies also provide examples of the "tight-loose" working relationship referred to in Chapter 5 of this Report. The relationship is one that is "tight" (or strict) on the results that partners have to achieve based on intergovernmental agreement and "loose" (or lenient) on the way they achieve them in the particular circumstances of each jurisdiction.

Background and other observations

7.6 The environment — and many other aspects of sustainable development — is a matter of shared jurisdiction between the federal and provincial governments. It is not specifically mentioned in the Constitution. Rather, both levels of government have constitutional powers over various matters that permit them to pass legislation to deal with environmental issues. In our previous reports, we recognized the complexity of managing within areas of shared jurisdiction.

7.7 This chapter presents five case studies involving federal, provincial and territorial governments working together on sustainable development issues: the Eastern Canada Acid Rain Program, the National Forest Strategy, the North American Waterfowl Management Plan, the Statement of Commitment to Complete Canada's Networks of Protected Areas, and the Greenhouse Gas Emission Reduction Trading Pilot.

Working With the Private Sector

Chapter 8 – Main Points

8.1 The purpose of our study was to draw to Parliament's attention the use of co-operative arrangements between government and the private sector to achieve environmental and broader sustainable development goals. There has been an increase in the use of such arrangements, which include negotiated rule making, flexible approaches to enforcement, voluntary codes of conduct and agreements.

8.2 Concerns have been raised about the accountability, credibility and effectiveness of co-operative arrangements. These types of arrangements are relatively new so that general conclusions about their effectiveness can not yet be reached. We noted their benefits and challenges, and the lessons that can be applied to address these concerns.

8.3 Co-operative arrangements offer a promising and imaginative way to solve many problems of priority setting, equity and efficiency that come with building an approach based on the principles of sustainable development. However, they must be developed and implemented with care. A co-operative arrangement is one of many approaches to implementing public policy and is not appropriate for solving all problems. It is most effective when it is carried out within a strong framework of regulation and enforcement.

8.4 Government cannot delegate its accountability for achieving public policy objectives and protecting the public good. To address this accountability through the use of co-operative arrangements, government needs to set clear objectives, establish management and reporting mechanisms to ensure transparency, and consult when identifying participants and other interested parties.

Background and other observations

8.5 The case studies in this chapter draw attention to the innovative use of co-operative arrangements to develop solutions to environmental and broader sustainable development problems, to implement these solutions and to contribute to the policy agenda. They highlight opportunities and challenges across a range of policy tools, from improving effectiveness of regulation to advancing a management approach, to demonstrating and encouraging integrated decision making.

8.6 We noted how co-operative arrangements have the potential to allow both public and private sector organizations to extend their reach beyond their core competencies and constituencies. By concentrating a variety of resources, perspectives and capabilities, parties can meet their objectives more effectively. They can identify new and innovative solutions to address the concerns of different interested parties.

8.7 The establishment of co-operative initiatives presents a number of challenges. There is a need to determine where compatible goals and mutual benefits exist for each of the parties. Finding the right participants, securing resources, establishing relationships and building trust take time and patience. Agreeing on the respective roles and responsibilities of the participants requires commitment and attention to detail.

Follow-Up of Previous Audits: More Action Needed

Chapter 9 – Main Points

9.1 The purpose of follow-up is to inform Parliament about actions that federal departments have taken to address previous observations and recommendations of the Auditor General and the Commissioner of the Environment and Sustainable Development. This follow-up chapter reports on the status of four separate audits.

9.2 We are not satisfied with the overall progress that federal departments have made in addressing the findings in Chapter 4 of the April 1997 Report of the Auditor General, Control of the Transboundary Movement of Hazardous Waste. Canada is still not in a position to know the extent to which it is fulfilling its international obligations to prevent illegal traffic of hazardous waste at the border and does not have an action plan to address significant gaps.

9.3 We are satisfied with the progress that departments have made in addressing the findings in Chapter 27 of the December 1997 Report of the Auditor General, Ozone Layer Protection: The Unfinished Journey. Environment Canada, the lead federal department, has shown strong commitment and leadership, internationally and domestically, in developing policies and programs aimed at eliminating or reducing ozone-depleting substances (ODS). Canada continues to meet its international phase-out and financial obligations and, with the provinces, maintains a national program for the recovery and recycling of ODS. Environment Canada needs to make further progress in enforcing the ODS regulations of the *Canadian Environmental Protection Act*, setting direction for federal departments, and planning for the future.

9.4 Environment Canada's enforcement program continues to be a cause of significant concern. We examined enforcement activities in the audits of the transboundary movement of hazardous waste and ozone layer protection. In our follow-up we found little or no improvement in many enforcement-related activities. Environment Canada provided us with conflicting data on inspection activities at the border.

9.5 With respect to Chapter 4 of the May 1998 Report of the Commissioner of the Environment and Sustainable Development, Canada's Biodiversity Clock Is Ticking, we are satisfied overall with the progress that departments have made. We recognize that the implementation of the Canadian Biodiversity Strategy is a complex task. Departments realize that there is still much work to be done at the federal and national levels to fully integrate biodiversity into their programs and policies.

9.6 We believe that the Canadian Environmental Assessment Agency has taken reasonable steps to address the findings directed to it in Chapter 6 of the Commissioner's 1998 Report. Overall, however, we are not satisfied with the progress made by departments in correcting the deficiencies noted.

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons – 2000

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CANADA

Rapport du commissaire à l'environnement et au développement durable à la Chambre des communes

Observations du commissaire – 2000
Avant-propos et Points saillants

2000

Le Rapport de l'an 2000 comporte 9 chapitres, ainsi que les « Observations du commissaire » et un Avant-propos. Pour mieux répondre aux besoins de nos clients, il est disponible sur divers supports. Pour obtenir d'autres documents ou les obtenir sur un autre support, voir la Table des matières et le bon de commande à la fin du présent document.

Dans le présent rapport, le genre masculin est utilisé sans aucune discrimination et uniquement dans le but d'alléger le texte.

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N° de catalogue FA1-2/2000-0
ISBN 0-662-64976-1

EcoLogo^{M} Paper / Papier Éco-Logo^{M}

AUDITOR GENERAL OF CANADA
COMMISSIONER OF THE ENVIRONMENT
AND SUSTAINABLE DEVELOPMENT

CANADA

VÉRIFICATEUR GÉNÉRAL DU CANADA
COMMISSAIRE À L'ENVIRONNEMENT
ET AU DÉVELOPPEMENT DURABLE

À l'honorable Président de la Chambre des communes :

Au nom du vérificateur général du Canada, j'ai l'honneur de transmettre par la présente mon rapport à la Chambre des communes pour l'année 2000, qui doit être déposé devant la Chambre conformément aux dispositions du paragraphe 23(3) de la *Loi sur le vérificateur général.*

Le commissaire à l'environnement et au développement durable par intérim,

Richard Smith
Richard Smith

OTTAWA, 30 mai 2000

AU LECTEUR :

Je vous invite à me faire part de vos commentaires et suggestions sur ce rapport, le plan de travail proposé et toute autre question liée à l'environnement et au développement durable. Veuillez adresser vos commentaires à l'adresse suivante :

Monsieur Richard Smith

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Avant-propos

Rapport du commissaire à l'environnement et au développement durable – 2000

Avant-propos

À titre de commissaire à l'environnement et au développement durable par intérim, je suis heureux de soumettre le Rapport de l'an 2000 pour être déposé à la Chambre des communes.

La majeure partie de ce rapport a été préparée sous la gouverne de M. Brian Emmett qui, depuis le 31 janvier 2000, occupe le poste de vice-président, Politiques, à l'Agence canadienne de développement international. Au cours des trois années et demie où il a rempli les fonctions de premier commissaire, M. Emmett a largement contribué à l'amélioration de notre compréhension de la gestion, par le gouvernement fédéral, des enjeux que représentent l'environnement et le développement durable. L'équipe qu'il a créée s'est engagée à poursuivre son travail. Le vérificateur général mène actuellement un processus de sélection national afin de nommer un nouveau commissaire à l'été 2000.

Cet avant-propos est suivi de « Observations du commissaire – 2000 » et des points saillants qui sont tirés de tous les chapitres de cette année. Le Rapport contient en outre neuf chapitres reliés séparément :

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2. L'écologisation des opérations gouvernementales : quand le gouvernement sera-t-il à la hauteur?
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Observations du commissaire — 2000

Points saillants

1. Bien que le gouvernement fédéral ait à maintes reprises réitéré son engagement à l'égard du développement durable — établir un équilibre viable entre les objectifs économiques, sociaux et environnementaux, maintenant et pour les générations futures — il continue d'éprouver de la difficulté à passer de la parole aux actes.

2. La poursuite du développement durable est rendue plus complexe par le fait que la responsabilité à cet égard est largement partagée entre les ministères et entre les gouvernements, de même qu'avec d'autres partenaires. Généralement, un certain nombre d'organisations sont responsables de tel ou tel aspect d'une question, mais aucune n'est responsable de l'ensemble. Elles doivent travailler de concert en vue de concevoir et de mettre en oeuvre une stratégie coordonnée. Mais la gestion de ces relations de travail s'est avérée difficile.

3. **Le smog — un risque pour la santé.** Depuis dix ans, par exemple, le gouvernement fédéral rappelle régulièrement que le problème du smog au Canada est une importante question de santé publique, ainsi qu'une grave menace pour l'environnement. Il y a dix ans, les ministres fédéral, provinciaux et territoriaux de l'environnement ont reconnu les graves conséquences de l'ozone troposphérique — une composante clé du smog — et ils ont entériné un plan pour le réduire. L'objectif du plan était de « résoudre complètement » le problème d'ici 2005.

- Les gouvernements ont pris un bon départ mais ils ont omis de suivre les étapes suivantes. Ils ont convenu d'un plan mais ils ne l'ont pas mis en oeuvre. Les améliorations déjà obtenues au chapitre de la qualité de l'air s'amenuisent lentement en raison de la hausse des émissions attribuable à un plus grand nombre de véhicules et à l'utilisation accrue d'énergie. Des niveaux de polluants qui, jusqu'ici, étaient considérés comme sécuritaires sont mis en question.
- Le plan du Canada en matière de lutte contre le smog a échoué parce que le partenariat qui devait le soutenir n'a pas fonctionné. Le gouvernement fédéral a, en grande partie, fait ce qu'il avait dit qu'il ferait; par contre, il ne s'est pas acquitté de sa tâche la plus importante, guider l'effort national de réduction du smog. Le problème du smog au Canada est loin d'être réglé. Une nouvelle approche s'impose.

4. **Le smog ne constitue pas un cas isolé.** Dans les rapports précédents, nous avons cerné des problèmes persistants dans la gestion, par le gouvernement fédéral, des enjeux clés tels que les changements climatiques, les substances toxiques et la biodiversité. Parmi ces problèmes, mentionnons des objectifs, des rôles et des responsabilités mal définis, des lacunes au niveau de la mesure de la performance et de la communication de l'information sur celle-ci et enfin, des dispositions inappropriées en matière d'examen et de vérification. Il s'ensuit que les engagements pris envers les Canadiens n'ont pas été respectés.

5. **La reddition de comptes est un élément essentiel à l'établissement de relations de travail efficaces.** Le présent Rapport fournit quelques exemples de relations de travail réussies — qui combinent des rapports crédibles, des mécanismes redditionnels efficaces, des processus transparents et la protection de l'intérêt public. Trop souvent toutefois, la conclusion d'une entente est perçue comme une fin en soi plutôt que comme un moyen de produire des résultats pour les Canadiens de manière efficiente et efficace. Et trop souvent aussi, bon nombre des facteurs essentiels à un régime redditionnel efficace ne sont pas au premier plan des préoccupations des

personnes qui pensent à établir un partenariat réussi. Les organismes centraux ont un rôle important à jouer en veillant à ce que les éléments d'une bonne relation de travail soient compris et utilisés par les ministères.

6. Autres enjeux clés :

- **L'aide gouvernementale : investissements dans les énergies renouvelables et non renouvelables.** Dans le passé, la plupart des dépenses fédérales et des incitatifs fiscaux dans le secteur de l'énergie ciblaient les ressources non renouvelables, source prédominante d'énergie au Canada. Aujourd'hui, sauf pour quelques exceptions, l'aide gouvernementale aux investissements dans le secteur de l'énergie ne favorise pas particulièrement le secteur des ressources non renouvelables par rapport au secteur des ressources renouvelables. Cependant, les investisseurs interrogés au cours de notre enquête croient que de nombreux projets d'investissement dans les énergies renouvelables et l'efficacité énergétique ne présentent pas actuellement des caractéristiques attrayantes. Par conséquent, le gouvernement fédéral voudra peut-être réexaminer sa stratégie en vue d'atteindre les objectifs qu'il s'est fixés pour les énergies renouvelables et l'efficacité énergétique.

- **Les stratégies de développement durable.** Les ministères ont déclaré qu'ils avaient réalisé 20 p. 100 des engagements décrits dans leur stratégie, par rapport à 11 p. 100 en 1998. De plus, ils améliorent les pratiques de gestion qui soutiennent la mise en oeuvre de la stratégie. Leur deuxième stratégie sera déposée à la Chambre des communes d'ici décembre 2000; je m'attends à ce qu'il y ait une amélioration marquée sur le plan de la qualité.

- **L'écologisation des opérations gouvernementales.** Il y a dix ans, le gouvernement fédéral s'est engagé à faire preuve de leadership en réduisant les conséquences environnementales de ses propres opérations. Aujourd'hui, cependant, on ne dispose que d'informations élémentaires sur les opérations du gouvernement et leurs conséquences sur l'environnement. Aucune organisation n'a été chargée d'établir une méthode cohérente concernant l'écologisation des opérations gouvernementales et de faire rapport sur les progrès, et aucune ne juge devoir assumer un rôle de leader à ce chapitre.

7. Suivi de vérifications antérieures. Ce rapport présente également le premier suivi effectué depuis la création du poste de commissaire. Le suivi nous permet de vérifier si les ministères ont donné suite de manière satisfaisante à nos recommandations et à nos observations. Dans l'ensemble, les progrès sont lents. En effet, après deux ans, seulement 5 p. 100 de nos recommandations ont été entièrement suivies, et les progrès sont insatisfaisants dans une proportion de 53 p. 100. Les ministères doivent redoubler leurs efforts.

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Introduction

8. Le présent chapitre met en relief les questions clés qui, à mon avis, devraient être portées à l'attention de la Chambre des communes. Les rapports précédents ont recensé trois principales lacunes dans la gestion, par le gouvernement fédéral, des questions liées à l'environnement et au développement durable (voir la pièce 1). Le présent Rapport met l'accent sur les défis qui se rattachent aux secteurs où les responsabilités sont largement partagées.

Gérer l'interdépendance

9. Certains des défis les plus pressants auxquels font face les gouvernements aujourd'hui, notamment la protection de l'environnement et la promotion du développement durable, relèvent du mandat de plusieurs ministères et de la compétence de plusieurs administrations. Généralement, un certain nombre d'organisations gouvernementales sont responsables de tel ou tel aspect d'une question, mais aucune n'est responsable de l'ensemble. Ces organisations doivent collaborer afin de concevoir et de mettre en oeuvre une réponse concertée.

10. Le partenariat peut constituer une façon plus novatrice, plus rentable et plus efficiente d'exécuter les programmes et d'offrir les services. Mais il comporte des risques, notamment que les mécanismes soient mal définis, que les engagements ne soient pas respectés, qu'une attention insuffisante soit apportée à la protection de l'intérêt public, que la transparence soit moindre et que la reddition de comptes soit inadéquate. Trop souvent, la conclusion d'une entente est perçue comme une fin en soi plutôt que comme un moyen de produire des résultats pour les Canadiens de manière efficiente et efficace. Comme nous l'avons indiqué dans nos rapports précédents, la gestion de ces types de relations de travail — au sein des gouvernements, entre les gouvernements et avec d'autres partenaires — s'est avérée un défi.

Les responsabilités à l'égard de l'atteinte des objectifs en matière de développement durable sont largement partagées; les gérer s'est avéré un défi.

11. Quand les organisations travaillent ensemble, la relation redditionnelle — l'obligation de rendre compte d'une responsabilité conférée — devient plus complexe. Il y a dix ans, le vérificateur général s'était demandé qui était responsable du bien-être environnemental au Canada, et il avait alors posé la question suivante : « Qui mène la boutique? » Il avait fait remarquer que le ministère de l'Environnement, qui a la responsabilité générale de coordonner les politiques et les programmes environnementaux fédéraux, ne pourrait pas régler

Pièce 1

Principales faiblesses de la gestion, par le gouvernement fédéral, des questions liées à l'environnement et au développement durable

Écart entre les engagements pris et les mesures concrètes adoptées. Les Canadiens se trouvent dans le peloton de tête pour ce qui est de la réflexion sur les questions liées à l'environnement et au développement durable, tant sur la scène nationale que sur la scène internationale. Nous avons moins bien réussi à traduire nos réflexions et nos paroles en mesures concrètes – à finir ce que nous avons commencé. Dans de nombreux domaines, la performance du gouvernement fédéral est loin de répondre aux objectifs énoncés.

Manque de coordination entre les ministères et entre les administrations. Certains des problèmes les plus pressants auxquels les gouvernements font face relèvent du mandat de plusieurs ministères et de compétences de plusieurs administrations. Il faut une coordination efficace pour relever les défis en matière de développement durable – et ce n'est pas le point fort des gouvernements.

Lacunes de l'examen du rendement et de l'information communiquée au Parlement. Une bonne information est essentielle si l'on veut prendre de bonnes décisions – fixer des priorités, élaborer des politiques et des programmes, évaluer les progrès et rendre compte des réalisations. L'information dont nous disposons actuellement n'est pas à la hauteur.

Source : Rapport du commissaire à l'environnement et au développement durable – 1999

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efficacement les grandes questions, à moins de collaborer avec d'autres ministères et d'autres ordres de gouvernement. Tout en reconnaissant qu'il était difficile de composer avec une responsabilité partagée au sein du gouvernement, il avait soutenu qu'il fallait éviter de l'éparpiller au point où il n'y ait plus de reddition de comptes efficace.

12. En se fondant sur les travaux effectués depuis, le vérificateur général a relevé les caractéristiques que devraient avoir les modalités de travail lorsque des partenaires travaillent ensemble à l'atteinte d'objectifs communs (voir la pièce 2). Des rapports crédibles, des mécanismes redditionnels efficaces, des processus transparents et la protection de l'intérêt public sont les éléments de base d'un tel cadre.

Pièce 2

Cadre d'établissement des nouveaux mécanismes de régie

Pour garantir des *rapports* crédibles, il faut prévoir :

- des objectifs clairs et publics;
- des attentes de rendement concrètes;
- la mesure du rendement et des modalités de rapport appropriées.

Pour établir des *mécanismes redditionnels* efficaces, il faut prévoir :

- des responsabilités et des rôles clairs;
- des ententes de rendement qui correspondent aux compétences;
- une structure de gestion bien définie;
- un régime de surveillance approprié;
- des dispositions prévoyant la résolution des conflits entre partenaires;
- des dispositions prévoyant expressément des évaluations;
- des procédures en cas de rendement insatisfaisant;
- un régime de vérification approprié.

Pour garantir une *transparence* adéquate, il faut prévoir :

- l'accès public à l'information;
- la communication de l'information sur les principales politiques et décisions.

Pour protéger *l'intérêt public*, il faut prévoir :

- des dispositions relatives aux plaintes et aux recours des citoyens;
- des dispositions concernant la consultation du public et la rétroaction;
- des politiques pour promouvoir les valeurs pertinentes du secteur public.

Source : Rapport du vérificateur général du Canada, chapitre 23, « La régie en partenariat : la reddition de comptes menacée », 1999

Objet du présent Rapport

13. Dans le présent Rapport, nous continuons de nous pencher sur les défis que représente pour le gouvernement fédéral la gestion de ses initiatives en matière d'environnement et de développement durable. Le partenariat a occupé une large place dans la stratégie fédérale. Au cours des dix dernières années, de nombreux engagements ont été pris qui nécessitent, pour atteindre les objectifs fixés, une coopération et une coordination entre les divers ministères, entre les gouvernements et avec d'autres partenaires.

14. Lors de l'examen d'enjeux tels que le smog, les pluies acides, les aires protégées, la biotechnologie et l'écologisation des opérations gouvernementales, nous avons déterminé les éléments clés de l'établissement et du maintien de relations de travail efficaces. Ces éléments peuvent servir de fondement à l'évaluation et à la modification des initiatives en cours, ainsi qu'à la conception de nouvelles initiatives.

Le smog : un risque pour la santé

Le smog représente une grave menace pour la santé et l'environnement

15. Nous avons examiné les efforts déployés par le gouvernement fédéral pour réduire les niveaux des polluants atmosphériques qui sont les principales composantes du smog; le chapitre 4 présente nos résultats. La pollution atmosphérique n'est pas un phénomène nouveau, mais elle a des conséquences importantes sur la santé, l'environnement et l'économie. Le terme « smog » a d'abord été utilisé pour décrire le mélange de fumée et de brouillard que l'on trouve dans l'air au-dessus des villes. Aujourd'hui, ce terme est utilisé pour efficacement les grandes questions, à moins de collaborer avec d'autres ministères et d'autres ordres de gouvernement. Tout en reconnaissant qu'il était difficile de composer avec une responsabilité partagée au sein du gouvernement, il avait soutenu qu'il fallait éviter de l'éparpiller au point où il n'y ait plus de reddition de comptes efficace.

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décrire une gamme plus grande de polluants atmosphériques. La plupart de ces polluants résultent des activités industrielles et de l'utilisation des combustibles fossiles — pétrole, gaz naturel et charbon — dans les véhicules automobiles, les résidences, les centrales thermiques et les usines.

16. Depuis dix ans, le gouvernement fédéral rappelle régulièrement que le problème du smog au Canada est une importante question de santé publique ainsi qu'une grave menace pour l'environnement. Tout en reconnaissant la difficulté d'établir un lien direct, le gouvernement a estimé que la pollution atmosphérique était responsable de quelque 5 000 décès prématurés par année dans 11 grandes villes canadiennes. Si ce chiffre est exact, plus de Canadiens meurent chaque année des suites de la pollution atmosphérique que des suites d'un accident d'automobile, d'un cancer du sein ou de la prostate ou d'un mélanome. En outre, un nombre beaucoup plus grand de Canadiens souffrent de problèmes, respiratoires ou autres, qui peuvent imposer un lourd fardeau à notre système de soins de santé. Le secteur de l'agriculture perd des millions de dollars chaque année en raison des effets sur les récoltes des polluants atmosphériques courants.

17. On note une tendance à la baisse de quelques polluants atmosphériques et, dans l'ensemble, la qualité de l'air au Canada s'est améliorée au cours des 30 dernières années à la suite des efforts déployés par les gouvernements fédéral et provinciaux et par l'industrie. Toutefois, les améliorations déjà obtenues au chapitre de la qualité de l'air s'amenuisent en raison de la hausse des émissions attribuable à un plus grand nombre de véhicules et à l'augmentation de la consommation et de la production d'énergie. Environnement Canada s'attend à ce que la qualité de l'air continue de se détériorer, à moins que des mesures vigoureuses ne soient prises. En outre, des niveaux de polluants qui, jusqu'ici, étaient considérés comme sécuritaires sont mis en question.

Un bon départ mais sans suite

18. En 1990, le Conseil canadien des ministres de l'environnement a reconnu les graves conséquences de l'ozone troposphérique et il a entériné un plan pour le réduire. Ce plan représentait une réalisation majeure pour les gouvernements fédéral, provinciaux et territoriaux et il fournissait une solide orientation stratégique pour résoudre le problème du smog au Canada. L'objectif du plan était de « résoudre complètement » les problèmes liés à l'ozone d'ici 2005.

Le problème du smog au Canada est une importante question de santé publique.

19. Après avoir approuvé le plan, toutefois, les partenaires ne se sont jamais entendus sur la façon de le mettre en oeuvre — quelles seraient les responsabilités de chacun et quels seraient les échéanciers. Le plan était donc voué à l'échec. Dix ans plus tard, un grand nombre des éléments de base d'une bonne gestion manquent toujours. Le gouvernement fédéral reconnaît maintenant que les progrès ont été plus lents que prévu et que la date cible initiale ne sera probablement pas respectée.

Le plan pour régler le problème du smog au Canada n'a jamais été mis en oeuvre.

20. Nous avons conclu que le gouvernement fédéral avait, en grande partie, fait ce qu'il avait dit qu'il ferait au cours de la première phase du plan. Par contre, il ne s'est pas acquitté de sa tâche la plus importante, guider l'effort national de réduction du smog. Par conséquent, la majorité des réductions potentielles d'émissions, qui devaient être assurées par d'autres parties, n'ont pas été réalisées. Je crois que la responsabilité du gouvernement fédéral se situe au-delà de ses propres activités de réduction du smog. En effet, il doit aussi collaborer avec les provinces et les territoires et travailler de concert avec ses autres partenaires à l'élaboration de stratégies et de plans nationaux efficaces. Si l'approche actuelle ne fonctionne pas, il faut en concevoir une autre.

La reddition de comptes dépend de la qualité de l'information communiquée sur la performance

21. Le gouvernement fédéral n'a pas réussi non plus à fournir au public et au Parlement une information appropriée sur les mesures retenues afin de respecter les engagements qu'il a pris envers les Canadiens en 1990 et sur les résultats des efforts à l'échelle du pays. Pour être utile, cette information doit être pertinente, crédible et compréhensible. Elle devrait aider le public et les députés à examiner en profondeur les intentions et les résultats obtenus, et elle devrait leur être fournie en temps opportun. Le public et le Parlement ne pouvaient donc pas, en l'absence de cette information, déterminer si le Canada s'attaquait à son problème de smog à un rythme raisonnable.

Le plan du Canada en matière de lutte contre le smog a échoué parce que le partenariat qui devait le soutenir n'a pas fonctionné.

Les prochaines étapes

22. C'est par l'entremise du Processus des standards pancanadiens que le Canada continue de s'occuper de la question du smog. Ce processus doit englober les engagements qui seront pris par chaque administration à l'égard de mesures précises concernant le smog. Les leçons tirées de l'expérience des dix dernières années doivent être appliquées à ce processus pour améliorer la qualité de l'air. En particulier, les parlementaires et tous les Canadiens devraient s'attendre à ce que des ententes précisent les rôles de chacun et les échéanciers, prévoient un système de surveillance et de communication des résultats afin d'évaluer les progrès réalisés et contiennent des dispositions pour les corrections en cours de route, le cas échéant. Si ces éléments clés d'une bonne gestion ne sont pas mis en place, le processus des standards pancanadiens donnera difficilement de bons résultats.

Travailler ensemble : des partenariats pour le développement durable

23. Le plan du Canada en matière de lutte contre le smog a échoué parce que le partenariat qui devait le soutenir n'a pas fonctionné. Et pourtant, le smog ne constitue pas un cas isolé.

- En 1998, nous avons fait rapport sur le Programme d'action national concernant les changements climatiques. Toutefois, de l'aveu même du gouvernement fédéral, au lieu de pointer vers une stabilisation des niveaux de 1990, les niveaux des émissions de gaz à effet de serre, au Canada, indiquaient une tendance inverse. Nous avons constaté l'absence de nombreux éléments d'un bon partenariat. En effet, il n'y avait pas d'attribution précise des rôles et des responsabilités ni de plan de mise en oeuvre. De plus, la surveillance des progrès était limitée et il n'y avait aucun rapport sommaire consolidé au Parlement.
- La protection de la biodiversité exige l'intervention des ministères aussi bien au niveau fédéral qu'au niveau provincial. En 1998, nous avons indiqué que les progrès étaient lents, en partie à cause des lacunes de la coordination au sein du gouvernement fédéral et entre les gouvernements.
- Notre vérification de 1999 a révélé des lacunes importantes au chapitre de la gestion des substances toxiques par le gouvernement fédéral. Nous avons noté, en particulier, que les ministères fédéraux avaient des vues fort divergentes sur de nombreuses questions clés. Le comportement de certains ministères constituait un obstacle de taille à l'efficacité des programmes fédéraux.
- Enfin, en 1999, nous avons vérifié sept ententes de coopération fédérale-provinciale dans le domaine de l'environnement et nous avons constaté qu'elles ne fonctionnaient pas aussi bien qu'elles le pourraient.

24. Le gouvernement fédéral reconnaît que la gestion de ce qu'on appelle maintenant l'administration « horizontale » est une question importante et qu'il faut faire mieux. Étant donné que le règlement de nombreuses questions liées à l'environnement et au développement durable exige des relations de travail efficaces, nous nous sommes intéressés à l'établissement de ces relations et à leur maintien. Le chapitre 5 présente un aperçu, le chapitre 6 traite de la collaboration au sein de l'administration fédérale, le chapitre 7 traite de la coopération entre les gouvernements fédéral, provinciaux et territoriaux et le chapitre 8 porte sur la coopération avec le secteur privé. Collectivement, ces chapitres présentent les résultats de 17 études de cas d'organisations qui travaillent ensemble à l'atteinte d'objectifs communs dans des domaines tels que la biotechnologie, les pluies acides, les forêts et les mines.

25. Ces études de cas illustrent l'importance de la coopération et de la coordination pour atteindre des objectifs stratégiques communs et améliorer l'efficience et l'efficacité des programmes. De plus, elles font ressortir que des relations de travail efficaces, que ce soit entre les ministères, entre les gouvernements ou entre les secteurs public et privé, présentent des caractéristiques communes.

26. Nous avons constaté, cependant, que bon nombre des facteurs essentiels à un régime redditionnel efficace ne sont pas au premier plan des préoccupations des personnes qui pensent à établir un partenariat réussi. Les participants aux mécanismes que nous avons examinés avaient cerné cinq principaux facteurs de succès : des objectifs et des résultats attendus clairs et réalistes; des buts partagés ou complémentaires; des personnes efficaces et engagées; des avantages évidents pour les organisations participantes; l'intérêt, le soutien et l'engagement de la haute direction.

27. Ces facteurs sont importants, mais d'autres éléments sont nécessaires à la reddition de comptes : des rôles et des responsabilités clairs, un équilibre entre les attentes et les capacités, des dispositions pour la surveillance, les rapports et l'évaluation. Les participants ont placé ces éléments bien au bas de la liste.

La reddition de comptes n'est pas au premier plan des préoccupations des personnes qui pensent à établir un partenariat réussi.

28. Pour gérer efficacement leurs relations de travail, les ministères doivent adopter une perspective plus vaste de ce qui constitue le succès, en attachant plus d'importance à la reddition de comptes. Les partenaires savent comment établir et maintenir des relations de travail ou ce qu'il faut pour assurer la reddition de comptes. Le défi consiste à passer de la parole aux actes.

29. Les études de cas montrent également que les partenaires doivent avoir la discipline requise pour suivre toutes les étapes nécessaires durant le cycle de vie d'une entente. Au cours des premières étapes — avant la conclusion de l'entente — les partenaires éventuels doivent porter une attention particulière à l'établissement de la relation. Ils doivent être persuadés que la question est importante et qu'un partenariat est la meilleure façon de s'en occuper. Au cours des dernières étapes — la conception de l'entente elle-même et la durée de celle-ci — il faut attacher plus d'importance à la reddition de comptes. L'établissement des relations et la reddition de comptes sont deux éléments essentiels d'une bonne relation de travail visant l'atteinte d'objectifs communs.

Les ministères doivent attacher plus d'importance à la reddition de comptes afin d'obtenir des résultats.

30. Les cas que nous avons examinés fournissent également des exemples de relations de travail « strictes-souples »; à la fois « strictes » quant aux résultats à obtenir selon l'entente intergouvernementale et « souples » quant à la façon d'obtenir ces résultats dans les circonstances propres à chaque administration. En 1985, dans le cadre du Programme de lutte contre les pluies acides dans l'Est du Canada, les ministres ont convenu de limites pour les émissions de dioxyde de soufre, afin de protéger les systèmes aquatiques modérément sensibles. Les gouvernements provinciaux ont décidé de la façon de parvenir aux réductions; ils ont suivi différentes approches mais ont atteint leurs objectifs.

31. Nous concluons que, lorsque les facteurs clés d'une bonne relation de travail sont combinés aux principaux éléments d'un mécanisme redditionnel efficace, il est plus probable que les relations de travail soient réussies et que les objectifs communs soient atteints. En revanche, l'absence de ces facteurs et éléments fait augmenter le risque d'échec.

Les organismes centraux peuvent contribuer à une gestion plus efficace des questions transsectorielles.

Le rôle des organismes centraux

32. Les organismes centraux peuvent contribuer à une gestion plus efficace des questions transsectorielles. Le Bureau du Conseil privé et le Secrétariat du Conseil du Trésor ont des rôles importants à jouer, en faisant en sorte que les ministères comprennent les principes et les éléments d'une bonne relation de travail et les appliquent, et en coordonnant les initiatives horizontales.

L'aide gouvernementale aux investissements dans le secteur de l'énergie

33. L'utilisation et la production de combustibles fossiles contribuent de manière importante à la formation du smog et à l'émergence d'autres problèmes environnementaux. Certains sont d'avis que l'aide gouvernementale fédérale aux investissements dans le secteur de l'énergie favorise les sources d'énergie non renouvelable, en particulier les combustibles fossiles, et que l'ensemble de cette aide prend la forme de subventions cachées dans le régime fiscal. Dans le chapitre 3, nous faisons état des constatations d'une étude que nous avons effectuée pour donner de l'information sur l'aide gouvernementale aux investissements dans le secteur de l'énergie et pour établir si cette aide favorise le secteur des énergies non renouvelables. Nous nous sommes surtout intéressés à l'aide accordée par l'intermédiaire du régime fiscal parce qu'elle est moins transparente que le soutien direct. Nous avons aussi voulu savoir pourquoi l'énergie produite à partir des sources d'énergie renouvelable, autre que celle obtenue au moyen des grands projets d'aménagement hydroélectrique, représente une petite partie de l'ensemble de l'énergie disponible au Canada. Le régime fiscal joue-t-il un rôle déterminant à cet égard?

34. Dans le passé, les gouvernements ont appuyé le développement des sources d'énergie et encouragé l'efficacité énergétique pour diverses raisons, notamment pour garantir un approvisionnement en énergie, développer les économies régionales et régler les problèmes environnementaux. En 1996, le gouvernement fédéral a déclaré, dans sa Stratégie sur les énergies renouvelables, qu'il voulait augmenter les investissements dans les énergies renouvelables. Depuis de nombreuses années, il a dit également souhaiter que les Canadiens utilisent l'énergie avec plus d'efficience.

35. Dans le passé, la plupart des dépenses fédérales et des incitatifs fiscaux ciblaient les ressources non renouvelables, source prédominante d'énergie au Canada. Aujourd'hui, cependant, sauf pour quelques exceptions, l'aide gouvernementale aux investissements dans le secteur de l'énergie ne favorise pas particulièrement le secteur des ressources non renouvelables par rapport au secteur des ressources renouvelables. Nous avons aussi constaté que le régime fiscal n'encourage pas certains investissements qui ont pour objet d'améliorer l'efficacité énergétique.

36. Du point de vue d'un investisseur, les projets d'investissement dans les énergies renouvelables et l'efficacité énergétique sont en concurrence avec de nombreuses autres possibilités d'investissement. La plupart des investisseurs interrogés au cours de notre enquête croient que de nombreux projets d'investissement dans les énergies renouvelables ne donnent pas un taux de rendement suffisant pour constituer un investissement souhaitable. Ils ont tendance à ne pas avoir de marchés établis et de produits ayant fait leurs preuves qui attirent les investisseurs. La période de récupération des investissements dans les énergies renouvelables et l'efficacité énergétique est souvent aussi trop longue pour qu'ils aient la préférence des investisseurs. Compte tenu de ces obstacles, le gouvernement fédéral voudra peut-être envisager d'élaborer de nouvelles stratégies devant permettre d'atteindre ses objectifs liés aux énergies renouvelables et à l'efficacité énergétique.

Les projets d'investissement dans les énergies renouvelables et l'efficacité énergétique sont en concurrence avec de nombreuses autres possibilités d'investissement.

Passer de la parole aux actes

Mise en oeuvre des stratégies de développement durable

37. Les stratégies ministérielles constituent un important élément des initiatives en matière de développement durable du gouvernement fédéral. La surveillance des progrès et la communication d'information sur ceux-ci sont des aspects clés de notre mandat. Notre objectif consiste à aider les parlementaires à comprendre et à surveiller le processus de la stratégie, de même qu'à aider les ministères à comprendre leurs obligations en matière de gestion et les bonnes pratiques pour s'en acquitter. Le chapitre 1 du présent Rapport constitue notre deuxième évaluation des stratégies de développement durable. Celles-ci demeurent un travail en évolution.

38. Lors de notre vérification de cette année, les ministères étaient à mi-chemin environ de la période couverte par leur stratégie. Selon leurs propres rapports, ils avaient réalisé quelque 20 p. 100 des engagements décrits dans leur stratégie, par rapport à 11 p. 100 en 1998. La mise en oeuvre de leur plan d'action s'améliore également.

39. En revanche, la qualité de l'information fournie au Parlement par la plupart des ministères, dans leur deuxième rapport annuel sur les progrès de la mise en oeuvre de leur stratégie de développement durable, est toujours loin de répondre aux normes du Conseil du Trésor. Par conséquent, il demeure difficile de déterminer si les stratégies sont sur la bonne voie ou si des mesures correctives s'imposent.

40. Les ministères commencent à peine à adopter une approche systématique à l'égard de la mise en oeuvre de leur stratégie. Nous avons examiné les pratiques de gestion de six ministères et avons constaté qu'il y avait eu amélioration depuis l'an dernier. En moyenne, ils appliquaient la moitié des pratiques nécessaires pour fournir une assurance raisonnable qu'ils obtiendraient les résultats escomptés. Comme le montre la pièce 3, les ministères que nous avons examinés n'avaient appliqué, l'an dernier, que le tiers environ de ces pratiques de gestion.

41. La pièce 3 montre également que les pratiques ministérielles continuent d'être plus énergiques au tout début du cycle de gestion et qu'elles s'affaiblissent à mesure que les ministères passent à la mise en oeuvre, puis à la surveillance et aux améliorations. Les ministères doivent mettre en place de solides systèmes de gestion pour appuyer la mise en oeuvre de leur stratégie.

Le gouvernement a réitéré sa volonté de se poser comme modèle d'excellence environnementale.

L'écologisation des opérations gouvernementales

42. Il y a dix ans, le gouvernement fédéral s'est engagé à faire preuve de leadership en réduisant les conséquences environnementales de ses propres opérations. Dans le discours du Trône d'octobre 1999, il a réitéré sa volonté de se poser comme modèle d'excellence environnementale.

43. En 1996, nous avons examiné les progrès accomplis et avons noté une absence de leadership concernant le processus d'écologisation, tant à l'échelle du gouvernement qu'au sein des différents ministères et organismes. Nous avons aussi constaté que l'information communiquée sur les progrès était sélective. Aucun rapport d'ensemble n'avait été produit et il n'y avait pas de plan de rapport global consolidé dans un avenir prévisible.

44. L'année dernière, nous avons signalé que les ministères n'étaient pas encore en mesure de faire le suivi de leur performance environnementale et qu'on ne disposait pas d'une base d'information pour faire rapport au Parlement sur les progrès accomplis à l'échelle du gouvernement en matière d'écologisation des opérations. Dans le chapitre 2 du présent Rapport, nous nous penchons de nouveau sur cette question en insistant sur les progrès accomplis par les ministères en ce qui concerne la mesure de la performance environnementale de leurs opérations internes.

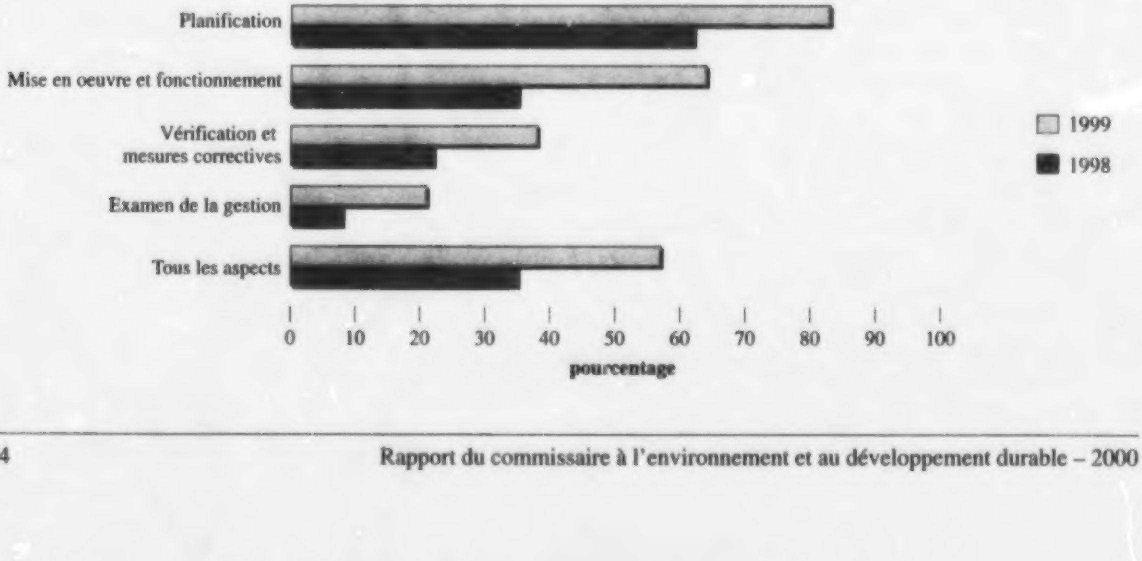
45. Le gouvernement fédéral est la plus grande entreprise au pays. Il a un effectif de 224 000 employés, gère directement 21,4 millions d'hectares de terre et 59 000 immeubles et installations, achète pour plus de 8 milliards de biens et services et possède 25 000 véhicules. La manière dont il gère ces ressources a des conséquences financières et environnementales importantes.

46. Et pourtant, on ne dispose que d'informations élémentaires sur de vastes opérations du gouvernement et leurs conséquences sur l'environnement. Le gouvernement fédéral ne sait pas quels sont les impacts environnementaux et les coûts de ses opérations — mais il devrait le savoir. Quant à l'élaboration d'un système de mesure de la performance environnementale ou de mesures de la performance communes pour les ministères, les progrès sont aussi lents et inégaux. Il n'y a toujours pas de rapports

Pièce 3

Comparaison de pratiques de gestion appliquées avec la norme ISO 14001 – Moyennes pour les six ministères que nous avons examinés en 1999 et les six que nous avons examinés en 1998

Voir le chapitre 1 pour de plus amples renseignements.



sur la performance pour l'ensemble du gouvernement.

47. Un certain nombre d'initiatives interministérielles sont en cours mais le leadership est fragmenté. Aucune organisation n'a été chargée d'établir une méthode cohérente concernant l'écologisation des opérations gouvernementales et de faire rapport sur les progrès, et aucune ne juge devoir assumer un rôle de leader à ce chapitre. Les organismes centraux ont un rôle important à jouer dans l'élaboration de normes s'appliquant à l'ensemble du gouvernement.

Suivi de vérifications antérieures : il faut faire davantage

48. Le suivi constitue une partie importante de notre processus de vérification. Il nous permet de tenir le Parlement au courant des progrès accomplis par les ministères à la suite des recommandations de nos rapports. Le chapitre 9 présente les résultats du premier suivi effectué depuis la création du poste de commissaire. Ce suivi a comme principal objectif de vérifier si les ministères ont donné suite de manière satisfaisante à nos recommandations et à nos observations.

49. Nous nous sommes surtout intéressés à quatre vérifications présentées dans les chapitres des rapports de 1997 et de 1998 : « Le contrôle des mouvements transfrontaliers des déchets dangereux » (avril 1997); « Protection de la couche d'ozone : le parcours inachevé » (décembre 1997); « La biodiversité au Canada : le temps presse » (mai 1998); « L'évaluation environnementale : un outil de première importance pour le développement durable » (mai 1998).

50. Je suis satisfait des progrès qui ont été faits jusqu'ici par le gouvernement pour donner suite aux observations et aux recommandations que nous avions formulées dans les chapitres sur l'ozone et la biodiversité. Environnement Canada continue à faire preuve d'engagement et de leadership pour ce qui est de l'élaboration des politiques et des programmes visant à éliminer ou à réduire les substances appauvrissant la couche d'ozone. Les obligations internationales sont respectées. À l'heure actuelle, les ministères établissent des cadres de mesure de la performance dans le domaine de la biodiversité, et le Canada participe à l'élaboration d'un cadre international de communication de l'information. Enfin, de nouveaux partenariats ont été constitués pour améliorer la coopération.

51. Je ne suis pas satisfait des progrès réalisés en ce qui concerne les mouvements transfrontaliers des déchets dangereux. Le Canada n'est toujours pas en position de connaître la mesure dans laquelle il respecte ses obligations internationales en matière de prévention du trafic illicite de déchets dangereux à la frontière et il n'a pas de plan d'action pour combler les lacunes importantes dans l'application de la loi.

52. L'Agence canadienne d'évaluation environnementale a pris des mesures raisonnables pour faire suite aux constatations de notre vérification. Elle a mené une revue de la conformité en collaboration avec les ministères et elle a publié des lignes directrices, comme nous l'avions recommandé. Néanmoins, nous ne sommes pas satisfaits des progrès accomplis par d'autres ministères et d'autres organismes. Et même les ministères qui ont pris des mesures pour améliorer leurs processus d'évaluation ne signalent que peu de modifications à leurs pratiques actuelles.

53. Dans l'ensemble, on a agi avec lenteur à la suite de nos recommandations. Des lacunes sont apparentes en ce qui concerne la mise en oeuvre, l'information, le leadership et la gestion des relations de travail. Seulement 5 p. 100 de nos recommandations ont été entièrement

Dans l'ensemble, on a agi avec lenteur à la suite de nos recommandations et de nos observations formulées dans des rapports antérieurs.

Les ministères préparent actuellement leur deuxième stratégie de développement durable qui sera présentée à la Chambre des communes d'ici décembre 2000. Je m'attends à ce qu'il y ait une amélioration marquée sur le plan de la qualité.

suivies et les progrès sont insatisfaisants dans une proportion de 53 p. 100. Nous croyons que nos recommandations sont toujours pertinentes et valables; les ministères doivent redoubler leurs efforts. Nous continuerons de surveiller leurs progrès.

Notre plan de travail

54. Notre programme de travail est divisé en quatre grands secteurs : l'examen des stratégies de développement durable des ministères et de leur mise en oeuvre; les vérifications de la gestion, par le gouvernement fédéral, des questions liées à l'environnement et au développement durable; les études visant à accroître la compréhension des pratiques de gestion et à les améliorer; et le suivi des pétitions. La pièce 4 résume notre plan de travail pour la prochaine année.

L'examen des stratégies de développement durable

55. Les stratégies ministérielles sont un outil important pour la promotion du développement durable à l'échelle de l'administration fédérale. Elles énoncent les objectifs de chaque ministère et les étapes qu'il entend suivre pour les atteindre. Les ministères ont publié leur première stratégie en 1997. Ils préparent actuellement leur deuxième stratégie qui sera présentée à la Chambre des communes d'ici décembre 2000.

56. Mise à jour des stratégies de développement durable. En décembre 1999, nous avons publié un document précisant nos attentes pour la deuxième série de stratégies de développement durable. Nous avons demandé aux ministères d'axer leurs efforts sur trois secteurs :

- **évaluer** leur première stratégie : déterminer ce que cette première stratégie a permis d'accomplir, ce qui a changé et ce qui doit être fait différemment, et utiliser leur évaluation au cours des consultations qui serviront à préparer la deuxième stratégie;

- consolider la **planification** des stratégies : établir des liens clairs entre les activités des ministères, les incidences

Pièce 4

Questions liées à l'environnement et au développement durable : notre plan de travail

Tâche	2001
Stratégies ministérielles de développement durable	Effectuer les vérifications suivantes : • deuxième série de stratégies de développement durable • mise en oeuvre des stratégies
Intégrer le quatrième « E » aux travaux du Bureau du vérificateur général L'argent a-t-il été dépensé en tenant dûment compte de l'économie, de l'efficience, de l'efficacité et de l'incidence environnementale?	Effectuer les vérifications suivantes : • gestion des questions liées à l'environnement et au développement durable dans le cadre du bassin des Grands Lacs et du fleuve Saint-Laurent, notamment la gestion de l'eau, les espèces et les habitats, les pêches et l'agriculture Effectuer un suivi de vérifications antérieures : • changements climatiques • efficacité énergétique
Études	Effectuer l'étude suivante : • volet social du développement durable
Pétitions	Surveillance au nom du vérificateur général

importantes de ces activités et les mesures à prendre en priorité;

- accélérer l'établissement des **systèmes de gestion** nécessaires pour que les stratégies permettent de passer de la parole aux actes.

57. Dans chacun de ces secteurs, le soutien, la participation et l'engagement de la haute direction seront essentiels pour que l'organisation puisse continuer d'avancer dans la voie du progrès. Conformément au thème du Rapport de cette année, Travailler ensemble, le document de décembre indique aussi que les ministères doivent unir leurs efforts dans les secteurs de responsabilité partagée.

58. Mettre en oeuvre les stratégies de développement durable. Depuis la publication de leur stratégie, les ministères ont concentré leurs efforts sur leur mise en oeuvre. En 1998 et 1999, ils ont présenté leur rapport sur les progrès de leur stratégie. Ces rapports ont comme objectif d'aider les parlementaires, le public et les ministères eux-mêmes à déterminer si les stratégies sont sur la bonne voie ou si des mesures correctives s'imposent.

59. Nous continuerons de faire rapport chaque année sur la mesure dans laquelle les ministères ont fait ce qu'ils ont dit qu'ils feraient dans leur stratégie. Nous continuerons également d'examiner la capacité des ministères à exécuter leur stratégie, en nous servant de la norme ISO 14001 comme point de repère.

60. Établir des cibles claires et mesurables. En 1998, nous avons recommandé que les ministères établissent une série de points de repère précis pour juger du succès de la mise en oeuvre de leur stratégie et qu'ils les soumettent à la Chambre des communes au printemps de 1999. Nous présentons l'évaluation de ces cibles dans le chapitre 1 du présent Rapport. Cette année, 45 p. 100 des ministères ont soumis des cibles. La moitié de ces cibles ont maintenant des critères ou des mesures de succès clairement définis et une date de réalisation prévue. Mais les ministères continuent d'utiliser des mots tels que « accroître », « améliorer », « promouvoir », « aider » et « faciliter », au lieu de préciser ce qui doit être réalisé et quand cela doit être fait.

Vérifications de la gestion des questions liées à l'environnement et au développement durable

61. Par sa propre stratégie, le Bureau du vérificateur général s'emploie à intégrer le développement durable à ses travaux et à la manière de les réaliser. Au cours de l'année dernière, le vérificateur général a effectué un certain nombre de vérifications dont un important volet portait sur l'environnement et le développement durable (voir l'annexe B).

62. Au cours de la prochaine année, nous examinerons d'autres questions :

- **Gestion des questions liées à l'environnement et au développement durable dans le cadre du bassin des Grands Lacs et du Saint-Laurent.** Le Rapport de 2001 portera sur la gestion, par le gouvernement fédéral, des questions liées à l'environnement et au développement durable dans le cadre du bassin des Grands Lacs et du Saint-Laurent. Ce bassin constitue le plus grand réservoir d'eau douce du monde. Il est une source d'approvisionnement en énergie, en eau potable et en poisson et sert à des fins agricoles, récréatives et de transport aux habitants des deux côtés de la frontière depuis des siècles. Il est aussi l'une des régions les plus peuplées et industrialisées d'Amérique du Nord. Les travaux de vérification seront axés sur des aspects tels que l'eau, les espèces et leur habitat, les pêches et l'agriculture. Nous examinerons des questions telles que la mesure de la performance, les partenariats, la reddition de comptes de même que l'information aux fins de la prise de décisions.

Le Rapport de 2001 portera sur la gestion, par le gouvernement fédéral, des questions liées à l'environnement et au développement durable dans le cadre du bassin des Grands Lacs et du Saint-Laurent.

- **La dimension sociale du développement durable.** Jusqu'à maintenant, la plupart de nos travaux ont porté sur les dimensions environnementales et économiques du développement durable. La dimension sociale est également importante mais elle n'est pas aussi bien comprise. Au cours de la prochaine année, nous examinerons les vues actuelles en ce qui concerne la dimension sociale du développement durable et nous présenterons les résultats au Parlement en 2001. Cette étude servira de point de départ pour l'établissement de notre futur programme de travaux dans ce secteur.

Le partenariat a occupé une large place dans la stratégie fédérale.

Le processus de pétition

63. Les modifications apportées en 1995 à la *Loi sur le vérificateur général* ont créé le poste de commissaire à l'environnement et au développement durable et obligé les ministres à préparer une stratégie de développement durable. Les modifications ont aussi établi un processus de pétition. Celui-ci est un moyen pour les Canadiens de faire part de leurs préoccupations au sujet de questions particulières dans le domaine de l'environnement et du développement durable relevant de la compétence fédérale et d'obtenir une réponse à ces préoccupations.

64. Aux termes du processus, un résidant canadien peut envoyer une pétition au vérificateur général. Celle-ci est ensuite acheminée au ministre fédéral compétent qui doit y répondre dans un délai de 120 jours.

65. Le nombre de pétitions a diminué au cours de l'exercice terminé le 31 mars 2000. Deux nouvelles pétitions ont été reçues et envoyées aux ministres pour réponse, comparativement à neuf en 1999 et à dix en 1998. L'une d'elles porte sur l'utilisation de substances toxiques et l'autre, sur l'information en matière de développement durable dans les parcs nationaux du Canada. Toutefois, une pétition qui avait été reçue à la fin de 1998 a reçu une réponse en avril 1999. L'annexe C contient de l'information sur la nature et l'état d'avancement des pétitions. Au cours de la prochaine année, nous ferons l'examen du processus de pétition afin d'établir comment il pourrait être raffermi.

Conclusion

66. Le Rapport de cette année ciblait encore les défis que représente pour le gouvernement fédéral la gestion de ses initiatives en matière d'environnement et de développement durable. Le partenariat a occupé une large place dans la stratégie fédérale. Au cours des dix dernières années, de nombreux engagements ont été pris qui nécessitent, pour atteindre les objectifs fixés, une coopération et une coordination entre les divers ministères, entre les gouvernements et avec d'autres partenaires.

67. Dans les rapports précédents, nous avons cerné des problèmes persistants dans la gestion, par le gouvernement fédéral, d'enjeux clés tels que les changements climatiques, les substances toxiques et la biodiversité. Parmi ces problèmes, mentionnons des objectifs, des rôles et des responsabilités mal définis, des lacunes au niveau de la mesure de la performance et de la communication de l'information sur celle-ci et enfin, des dispositions inappropriées en matière d'examen et de vérification. Nous avons aussi constaté que les engagements pris envers les Canadiens n'avaient pas été respectés.

68. Lors de l'examen de questions telles que le smog, les pluies acides, les aires protégées, la biotechnologie et l'écologisation des opérations du gouvernement, nous avons déterminé les éléments clés de l'établissement et du maintien de relations de travail efficaces. Ces éléments peuvent servir de fondement à l'évaluation et à la modification des initiatives en cours, ainsi qu'à la conception de nouvelles initiatives.

Annexe A

Extraits de la *Loi sur le vérificateur général*

Loi concernant le Bureau du vérificateur général du Canada et le contrôle du développement durable.

DÉFINITIONS

Définitions

2. Les définitions qui suivent s'appliquent à la présente loi.

« commissaire »

« commissaire » Le commissaire à l'environnement et au développement durable nommé en application du paragraphe 15.1 (1).

« développement durable »

« développement durable » Développement qui permet de répondre aux besoins du présent sans compromettre la possibilité pour les générations futures de satisfaire les leurs.

« ministère de catégorie I »

« ministère de catégorie I »

a) Tout ministère mentionné à l'annexe I de la *Loi sur la gestion des finances publiques;*

b) tout ministère ayant fait l'objet de la directive prévue au paragraphe 24(3);

c) tout ministère, au sens de la *Loi sur la gestion des finances publiques*, mentionné à l'annexe.

« ministre compétent »

« ministre compétent » S'entend au sens de l'article 2 de la *Loi sur la gestion des finances publiques.*

« stratégie de développement durable »

« stratégie de développement durable » Stratégie comportant les objectifs et plans d'action d'un ministère de catégorie I en vue de promouvoir le développement durable.

FONCTIONS

Examen

5. Le vérificateur général est le vérificateur des comptes du Canada, y compris ceux qui ont trait au Trésor et, à ce titre, il effectue les examens et enquêtes qu'il juge nécessaires pour lui permettre de faire rapport comme l'exige la présente loi.

Idem

6. Le vérificateur général examine les différents états financiers qui doivent figurer dans les Comptes publics en vertu de l'article 64 de la *Loi sur la gestion des finances publiques* et tous autres états que lui soumet le président du Conseil du Trésor ou le ministre des Finances pour vérification; il indique si les états sont présentés fidèlement et conformément aux conventions comptables énoncées pour l'administration fédérale et selon une méthode compatible avec celle de l'année précédente; il fait éventuellement des réserves.

Rapports à la Chambre des communes

7. (1) Le vérificateur général établit à l'intention de la Chambre des communes un rapport annuel; il peut également établir à son intention — outre les rapports spéciaux prévus aux paragraphes 8(1) ou 19(2) et le rapport établi par le commissaire en application du paragraphe 23(2) — au plus trois rapports supplémentaires par année. Dans chacun de ces rapports :

a) il fournit des renseignements sur les activités de son bureau;

b) il indique s'il a reçu, dans l'exercice de ces activités, tous les renseignements et éclaircissements réclamés.

Idem

(2) Dans le rapport mentionné au paragraphe (1), le vérificateur général signale tout sujet qui, à son avis, est important et doit être porté à l'attention de la Chambre des communes, notamment les cas où il a constaté que :

a) les comptes n'ont pas été tenus d'une manière fidèle et régulière ou des deniers publics n'ont pas fait l'objet d'un compte rendu complet ou n'ont pas été versés au Trésor lorsque cela est légalement requis;

b) les registres essentiels n'ont pas été tenus ou les règles et procédures utilisées ont été insuffisantes pour sauvegarder et contrôler les biens publics, assurer un contrôle efficace des cotisations, du recouvrement et de la répartition régulière du revenu et assurer que les dépenses effectuées ont été autorisées;

c) des sommes d'argent ont été dépensées à d'autres fins que celles auxquelles le Parlement les avait affectées;

d) des sommes d'argent ont été dépensées sans égard à l'économie ou à l'efficience;

e) des procédures satisfaisantes n'ont pas été établies pour mesurer et faire rapport sur l'efficacité des programmes dans les cas où elles peuvent convenablement et raisonnablement être mises en oeuvre;

f) des sommes d'argent ont été dépensées sans égard à l'effet de ces dépenses sur l'environnement dans le contexte du développement durable.

PERSONNEL DU BUREAU DU VÉRIFICATEUR GÉNÉRAL

Nomination du commissaire

15.1 (1) Le vérificateur général nomme, conformément à la *Loi sur l'emploi dans la fonction publique*, un cadre supérieur relevant directement du vérificateur général et appelé commissaire à l'environnement et au développement durable.

Fonctions

(2) Le commissaire aide le vérificateur général à remplir ses fonctions en matière d'environnement et de développement durable. 1995, ch. 43, art. 4.

DÉVELOPPEMENT DURABLE

Mission

21.1 Le commissaire a pour mission d'assurer le contrôle des progrès accomplis par les ministères de catégorie I dans la voie du développement durable, concept en évolution constante reposant sur l'intégration de questions d'ordre social, économique et environnemental, et tributaire, notamment, de la réalisation des objectifs suivants :

a) l'intégration de l'environnement et de l'économie;

b) la protection de la santé des Canadiens;

c) la protection des écosystèmes;

d) le respect des obligations internationales du Canada;

e) la promotion de l'équité;

f) une approche intégrée pour la planification et la prise de décisions, grâce à l'évaluation des solutions économiques en fonction de leurs effets sur l'environnement et les ressources naturelles, et l'évaluation des solutions écologiques en fonction de leurs effets sur l'économie;

g) la prévention de la pollution;

h) le respect de la nature et des besoins des générations à venir.

Pétition

22. (1) S'il reçoit d'une personne résidant au Canada une pétition portant sur une question environnementale relative au développement durable et relevant de la compétence d'un ministère de catégorie I, le vérificateur général ouvre un dossier et transmet la pétition, dans les quinze jours suivant sa réception, au ministre compétent du ministère concerné.

Accusé de réception

(2) Dans les quinze jours suivant celui où il reçoit la pétition, le ministre en accuse réception et transmet copie de l'accusé de réception au vérificateur général.

Réponse du ministre

(3) Dans les cent vingt jours suivant celui où il reçoit la pétition, le ministre fait parvenir au pétitionnaire sa réponse et en transmet copie au vérificateur général. Il peut toutefois, dans ce délai, prolonger celui-ci en avisant personnellement le pétitionnaire, avec copie de l'avis au vérificateur général, qu'il lui est impossible de s'y conformer.

Plusieurs signataires

(4) S'il y a plusieurs signataires, il suffit au ministre de transmettre l'accusé de réception, l'avis, le cas échéant, et sa réponse à l'un d'entre eux.

Contrôle

23. (1) Le commissaire effectue les examens et enquêtes qu'il juge nécessaires pour :

a) contrôler la mesure dans laquelle chaque ministère de catégorie I a réalisé les objectifs prévus par sa stratégie de développement durable, une fois celle-ci déposée conformément à l'article 24, et mis en oeuvre les plans d'action de celle-ci;

b) assurer le suivi des réponses transmises par les ministres en application du paragraphe 22(3).

Rapport du commissaire

(2) Le commissaire établit au nom du vérificateur général et à l'intention de la Chambre des communes un rapport annuel sur toute question environnementale ou autre relative au développement durable qui, à son avis, doit être portée à la connaissance de la chambre, notamment :

a) la mesure dans laquelle chaque ministère de catégorie I a réalisé les objectifs prévus par sa stratégie de développement durable, une fois celle-ci déposée conformément à l'article 24, et mis en oeuvre les plans d'action de celle-ci;

b) le nombre de pétitions reçues aux termes du paragraphe 22(1), leur objet et l'état du dossier;

c) les cas d'exercice des pouvoirs conférés au gouverneur en conseil par les paragraphes 24(3) à (5).

Dépôt du rapport

(3) Le rapport est présenté au président de la Chambre des communes, puis déposé devant la chambre dans les quinze premiers jours de séance de celle-ci suivant la réception du rapport.

Dépôt de la stratégie de développement

24. (1) Le ministre compétent de chaque ministère de catégorie I dépose devant la Chambre des communes la stratégie de développement durable de celui-ci dans un délai de deux ans à compter de l'entrée en vigueur du présent paragraphe. Toutefois, dans le cas du ministère qui devient un ministère de catégorie I après l'entrée en vigueur du présent paragraphe, la stratégie doit être déposée avant soit le second anniversaire de la date où il l'est devenu, soit, si elle est antérieure à cet anniversaire, la date fixée par le gouverneur en conseil en application du paragraphe (4).

Révision de la stratégie et dépôt

(2) Le ministre compétent fait réviser au moins tous les trois ans la stratégie de développement durable du ministère de catégorie I en cause et fait déposer la stratégie révisée devant la Chambre des communes dans les quinze premiers jours de séance de celle-ci suivant la révision.

Assujettissement

(3) Sur recommandation du ministre compétent d'un ministère qui n'est pas mentionné à l'annexe I de la *Loi sur la gestion des finances publiques*, le gouverneur en conseil peut assujettir, par une directive à cet effet, le ministère aux obligations prévues aux paragraphes (1) et (2).

Date fixée par le gouverneur en conseil

(4) Pour l'application du paragraphe (1), le gouverneur en conseil peut, sur recommandation du ministre compétent, fixer la date avant laquelle doit être déposée devant la Chambre des communes la stratégie de développement durable du ministère qui devient un ministère de catégorie I après l'entrée en vigueur du présent paragraphe.

Règlements

(5) Le gouverneur en conseil peut par règlement, sur recommandation du ministre de l'Environnement, prescrire la forme et le contenu de la stratégie de développement durable.

Annexe B

Travaux du Bureau du vérificateur général sur l'environnement et le développement durable, 1999

Référence	Principales conclusions
Pêches et Océans – La gestion durable des stocks de mollusques et de crustacés de l'Atlantique, chapitre 4	En octobre 1997, nous avons fait rapport des problèmes liés à la gestion, par Pêches et Océans, des pêches du poisson de fond de l'Atlantique. Dans la présente vérification, nous avons constaté que bon nombre de ces problèmes sévissent également dans la gestion, par le Ministère, des pêches des mollusques et crustacés de l'Atlantique. Ainsi, nous avons remarqué que la capacité de capture s'accroît et que la participation des pêcheurs aux pêches des mollusques et crustacés est encouragée par la délivrance de permis de pêche à accès libre. En outre, nous avons relevé des trous dans l'information utilisée pour prendre des décisions sur la ressource ainsi que des lacunes dans le contrôle et la surveillance. Les répercussions globales de ces problèmes ne sont pas évidentes, car la plupart des pêches des mollusques et crustacés enregistrent actuellement de fortes valeurs au débarquement. Toutefois, à notre avis, ce sont là des préoccupations majeures sur lesquelles il faut se pencher afin que les pêches des mollusques et crustacés soient gérées durablement. (Paragraphe 4.1)
La Stratégie du poisson de fond de l'Atlantique : suivi, chapitre 8	Nous croyons que les efforts déployés par le gouvernement, afin de donner suite aux recommandations du chapitre 16 de notre rapport de 1997 sur la Stratégie du poisson de fond de l'Atlantique, sont satisfaisants. De nouvelles mesures de restructuration et d'adaptation des pêches sont mises en oeuvre. Contrairement à ce que nous avions constaté en 1997, les critères d'admissibilité aux nouvelles mesures sont clairs, logiques et applicables. Le cadre de reddition de comptes établi pour les mesures corrige les faiblesses que nous avions observées à l'époque : les responsabilités des organisations sont maintenant définies, il existe un plan stratégique global et un mécanisme officiel de coordination est prévu. (Paragraphes 8.1 et 8.2)
Défense nationale – Les matières dangereuses : la gestion des risques pour les employés et l'environnement, chapitre 13	La vérification que nous avons faite dans dix bases des Forces canadiennes nous a permis de constater que les cas de non-respect des exigences de la législation et des politiques relatives aux matières dangereuses à la Défense nationale étaient répandus, fréquents et répétitifs. Cette situation peut exposer les employés et l'environnement à des risques accrus. Le Ministère a fait des efforts pour améliorer sa gestion des matières dangereuses. L'incidence de ces efforts n'a pas souvent été clairement mesurée, mais nous avons constaté que les taux de blessures associées à des matières dangereuses et nécessitant au moins une journée d'absence ont diminué de plus de la moitié entre 1993 et 1997. Toutefois, les cas de non-conformité n'occasionnent pas tous des accidents — certains peuvent endommager la santé des employés ou l'environnement sur une longue période. (Paragraphes 13.1 et 13.2)
Le programme Travaux d'infrastructure Canada : Phase II et suivi de la vérification de la Phase I, chapitre 17	Le suivi de notre chapitre de vérification de 1996 indique que peu de progrès ont été accomplis afin de combler les lacunes cernées dans la Phase I du programme Travaux d'infrastructure Canada. Le secteur principal où il y a eu amélioration est la réalisation d'une évaluation environnementale avant l'approbation des projets d'infrastructure. Cependant, il existe encore des faiblesses dans la définition et le suivi des mesures d'atténuation nécessaires. (Paragraphes 17.88 à 17.94)

Référence	Principales conclusions
Pêches et Océans – Le saumon du Pacifique : la durabilité des pêches, chapitre 20	Les pêches du saumon du Pacifique éprouvent de graves problèmes. L'ensemble des prises a fléchi, mais les captures commerciales ont chuté. La durabilité à long terme des pêches est en danger parce que des facteurs comme la surpêche, la perte d'habitats et le fléchissement de la productivité de l'océan ont érodé la ressource. Il en résulte une crise de gestion qui assombrit l'avenir des pêches du saumon. Ces pêches se poursuivront, mais des mesures de contrôle plus strictes seront nécessaires à court terme pour que le saumon survive au profit des générations futures. (Paragraphe 20.1)

F 2

Annexe C

Sommaire des pétitions reçues et des réponses des ministres

Sujet de la pétition*	Signataire	Ministère fédéral	Date de la pétition	Date de réception de la réponse	Réponse
19. **Application.** La signataire demande la tenue d'une enquête sur la non-application, par Pêches et Océans et par Environnement Canada, des lois sur la protection de l'environnement aux activités passées et courantes de la Pine Falls Paper Company à Pine Falls, au Manitoba.	Alice Chambers	Pêches et Océans	Le 30 novembre 1998	Le 23 avril 1999	Le ministre des Pêches et des Océans a fourni de l'information sur l'inspection, par la Garde côtière canadienne, des ponts de la Pine Falls Paper Company. La Garde côtière canadienne a établi que 14 des 26 ponts de la société qui franchissent des eaux navigables ne constituent pas un risque pour la navigation et que la prise d'autres mesures n'est pas nécessaire. Des évaluations environnementales ont été requises pour neuf ponts, et elles ont été effectuées et approuvées, à l'exception de l'évaluation en cours du pont Manigotagan. Compte tenu du délai entre la construction de ces ponts et le moment où Pêches et Océans est devenu conscient de toute incidence possible sur l'habitat du poisson, il serait difficile de prouver que celui-ci a subi des dommages. Pêches et Océans prévoit régler la question des futures incidences possibles des ponts sur l'habitat du poisson en appliquant des mesures d'atténuation lors des travaux d'entretien ou de la désaffectation.

* Les pétitions 1 à 7 étaient incluses dans le Rapport de 1998 et les pétitions 8 à 18, dans le Rapport de 1999.

Sujet de la pétition	Signataire	Ministère fédéral	Date de la pétition	Date de réception de la réponse	Réponse
		Environnement Canada		Le 21 avril 1999	Le ministre de l'Environnement a fait référence à une lettre précédente d'Environnement Canada adressée à la signataire de la pétition expliquant pourquoi aucune accusation n'avait été portée contre l'usine aux termes de la *Loi sur les pêches*. Cette lettre expliquait aussi que les exigences relatives à la surveillance des incidences environnementales étaient appliquées pour la première fois au Canada. Les problèmes éprouvés à l'usine de la Pine Falls Paper Company n'étaient pas uniquement attribuables à la société. Les gouvernements participants devaient accepter une part de responsabilité. Il a donc été décidé qu'un long processus judiciaire ne donnerait pas les résultats escomptés et qu'il constituerait une mauvaise utilisation de l'argent des contribuables. On a plutôt tenté de régler tous les problèmes administratifs et techniques. Le Ministre a indiqué qu'il serait possible, selon le Ministère, d'assurer l'application du *Règlement sur les effluents des fabriques de pâtes et papiers* en installant un système de traitement secondaire. Il a ajouté que des poursuites étaient justifiées dans le cas d'un déversement de la société, mais qu'elles ne l'étaient pas dans d'autres cas en raison de la nature de la violation et parce qu'elles n'assurent pas l'obtention des résultats souhaités et une application uniforme de la loi.

Sujet de la pétition	Signataire	Ministère fédéral	Date de la pétition	Date de réception de la réponse	Réponse
20. **Substances toxiques.** Le signataire s'inquiète au sujet de l'utilisation des pesticides, des herbicides et des fertilisants dans les fermes qui cultivent le ginseng dans le Centre de la Colombie-Britannique. Il exprime aussi des inquiétudes quant à l'incidence de ces produits sur les terres, les réseaux hydrographiques et la santé des travailleurs agricoles et d'autres travailleurs qui sont touchés indirectement.	Nelson A. Riis, député de Kamloops, Thompson et Highland Valleys, au nom des résidants de la région de Kamloops en Colombie-Britannique.	Santé Canada	Le 25 août 1999	Le 27 octobre 1999	Le ministre de la Santé a assuré le signataire que le Canada a l'un des systèmes de réglementation des pesticides les plus rigoureux au monde. Les produits antiparasitaires sont réglementés par la *Loi sur les produits antiparasitaires* et ils sont enregistrés par l'Agence de réglementation de la lutte antiparasitaire (ARLA). Les produits sont enregistrés uniquement si des données scientifiques suffisantes ont été fournies pour évaluer leur innocuité et leur valeur. L'évaluation doit conclure que les risques pour la santé humaine et pour l'environnement associés à l'utilisation prévue du produit sont acceptables et que celui-ci n'est efficace que pour l'utilisation prévue. L'innocuité et la valeur des produits qui ont été enregistrés pour application sur le ginseng ont été évaluées, et ils peuvent être utilisés comme prévu. Ils ne représentent aucune menace grave pour la santé humaine et l'environnement si on lit et comprend bien les directives sur l'étiquette et si on s'y conforme. L'ARLA a récemment conçu un programme pour faire connaître le système de réglementation des pesticides aux producteurs de ginseng et pour vérifier l'utilisation des pesticides. Des inspections récentes indiquent que les producteurs de ginseng utilisent des produits appropriés et qu'ils sont conscients de l'importance d'une utilisation prudente et judicieuse des pesticides. L'exposition des travailleurs aux produits antiparasitaires pendant l'application, de même qu'aux résidus dans les champs traités, est aussi prise en compte dans l'évaluation des produits antiparasitaires. L'ARLA participe actuellement à deux initiatives concernant l'exposition après traitement.

Sujet de la pétition	Signataire	Ministère fédéral	Date de la pétition	Date de réception de la réponse	Réponse
21. **Développement durable.** Le signataire exprime des inquiétudes parce que Parcs Canada n'a pas préparé d'information sur les trois dimensions du développement durable, soit les dimensions économique, environnementale et sociale. Il prétend que l'étude sur la vallée de Bow à Banff, le plan de gestion du parc Jasper et le plan communautaire de Jasper ne fournissent pas de données socioéconomiques. Le signataire prétend aussi que la politique sur les recettes des parcs nationaux, qui précise que la science ne doit être financée qu'au moyen de crédits parlementaires, n'est pas prise en compte au parc national Jasper, car l'argent est affecté aux programmes scientifiques plutôt qu'à l'entretien des immobilisations et aux services aux visiteurs.	Pat Crowley	Parcs Canada	Le 10 janvier 2000	En suspens	

Annexe D

Groupe des conseillers du commissaire à l'environnement et au développement durable

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Points saillants

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Chapitre 1 – Points saillants

1.1 L'information communiquée par la plupart des ministères dans leur deuxième rapport annuel sur les progrès de la mise en oeuvre de leur stratégie de développement durable est toujours loin d'être conforme aux *Lignes directrices pour la préparation des Rapports ministériels sur le rendement présentés au Parlement* du Secrétariat du Conseil du Trésor. Par conséquent, les parlementaires, les Canadiens et les autres parties intéressées auront de la difficulté à déterminer si les stratégies sont sur la bonne voie et si des mesures correctives s'imposent. Nous nous attendons à ce que la qualité des rapports s'améliore au fur et à mesure que les ministères adopteront une approche plus systématique à l'égard de la gestion de la mise en oeuvre de leur stratégie.

1.2 Dans l'ensemble, la mise en oeuvre des stratégies semble progresser. D'après notre évaluation de l'information communiquée par les ministères en 1999, ceux-ci ont réalisé environ 20 p. 100 des engagements décrits dans leur stratégie de développement durable, par rapport à onze pour cent en 1998. Les ministères mettent également au point leurs pratiques de gestion appliquées à la mise en oeuvre des stratégies. L'an passé, nous avons signalé que le tiers environ des pratiques de gestion des ministères reposaient sur la norme ISO 14001 sur les systèmes de gestion de l'environnement, qui sert de point de repère pour les bonnes pratiques de gestion. Cette année, les six ministères que nous avons examinés appliquaient, en moyenne, environ la moitié de ces pratiques.

1.3 Cependant, les pratiques de gestion de quatre des six ministères ne fournissent pas encore l'assurance raisonnable que leur stratégie sera mise en oeuvre de façon uniforme ni qu'elle donnera les résultats escomptés. Nous continuons de croire que les ministères devraient élaborer et appliquer un modèle de cycle de gestion pour appuyer la mise en oeuvre de leur stratégie.

Contexte et autres observations

1.4 En 1997, 28 ministères et organismes fédéraux ont déposé leur première stratégie de développement durable à la Chambre des communes. Depuis, ils travaillent à la mise en oeuvre de leur stratégie. Les ministères sont tenus de rendre compte tous les ans de leurs progrès à la Chambre des communes. Nous présentons dans ce chapitre la seconde évaluation annuelle, par le commissaire, de ces progrès.

1.5 Dans son rapport de 1998, le commissaire a recommandé que les ministères établissent des cibles claires et mesurables que les parlementaires, le public et eux-mêmes pourraient utiliser pour juger si les stratégies sont mises en oeuvre avec succès. Cette année, nous avons examiné les cibles révisées des ministères pour déterminer s'ils avaient énoncé des critères ou mesures de succès clairs pour chaque cible et s'ils avaient prévu une date de réalisation. Pour environ 50 p. 100 des cibles révisées, on trouvait un critère ou une mesure de succès clairs et une date prévue de réalisation. Seulement 45 p. 100 des ministères ont inclus des cibles et des indicateurs de rendement ou de performance dans leur rapport sur le rendement.

1.6 L'an dernier, nous avons examiné les pratiques de gestion suivies par six ministères pour mettre en oeuvre leur stratégie de développement durable. Nous avons utilisé la norme ISO 14001 sur les systèmes de gestion de l'environnement comme point de repère en matière de bonnes pratiques. Cette année, à l'aide du même point de repère, nous avons évalué les pratiques de gestion de six autres ministères. Pour quatre d'entre eux, nous avons constaté qu'il existait des écarts importants entre les pratiques et la norme ISO. Ces quatre ministères en sont toujours aux premières étapes de l'établissement d'une approche systématique pour la mise en oeuvre de leur stratégie. Ils n'ont pas encore adopté d'approche systématique pour établir leurs priorités, définir les attentes de la direction, attribuer la responsabilité des résultats aux niveaux inférieurs de l'organisation, cerner les besoins en formation connexes ou effectuer des autoévaluations qui faciliteraient l'amélioration continue.

L'écologisation des opérations gouvernementales

Quand le gouvernement sera-t-il à la hauteur?

Chapitre 2 – Points saillants

2.1 **Une décennie d'engagements envers l'écologisation des opérations gouvernementales.** Depuis 1990, le gouvernement fédéral promet aux Canadiens d'écologiser ses opérations. Or, une décennie plus tard, on constate l'absence d'informations élémentaires sur de vastes opérations du gouvernement, dont les coûts dépassent probablement 400 millions de dollars par année au chapitre de la consommation d'eau et d'énergie et de l'élimination des déchets. Nous avons constaté que le gouvernement ne dispose pas de données complètes et exactes sur le coût annuel de l'exploitation de ses immeubles et sur les impacts environnementaux de ses opérations. Étant donné l'ampleur des sommes en cause, nous croyons important que le gouvernement sache quelle est sa facture annuelle de chauffage, d'électricité et d'eau.

2.2 **Le Parlement devrait s'inquiéter.** Les ministères ont accepté de mettre en oeuvre un système de mesure de la performance environnementale en 1997, mais leurs progrès à ce titre sont lents et inégaux. Aucun ministère n'a mis en oeuvre pleinement tous les éléments du cadre de mesure de la performance. Le Parlement devrait s'inquiéter du rythme actuel de l'application de la mesure de la performance environnementale.

2.3 **Les Canadiens n'obtiendront pas de rapport consolidé sur la performance dans un avenir prévisible.** Étant donné la façon dont le gouvernement a choisi de gérer son programme environnemental, les Canadiens n'obtiendront pas de rapport consolidé sur la performance dans un avenir prévisible. Nous avons constaté une utilisation très limitée d'indicateurs de performance communs pour mesurer les progrès ministériels dans l'écologisation des opérations et pour en faire rapport. Il n'y a pas non plus d'orientation claire concernant l'élaboration de normes communes en matière de communication de l'information sur l'environnement. Le leadership est fragmenté. Aucune organisation n'a été chargée d'établir une méthode fédérale uniforme, intégrée et cohérente pour communiquer l'information sur la performance environnementale, ou ne juge devoir assumer un rôle de leader à ce chapitre.

Contexte et autres observations

2.4 Dans le discours du Trône d'octobre 1999, le gouvernement réitérait sa volonté d'écologiser ses opérations et de se poser comme modèle d'excellence environnementale. À titre de plus grande entreprise et de plus gros employeur au Canada, le gouvernement fédéral est en mesure de prêcher par l'exemple. Pour être un modèle d'excellence environnementale, il doit montrer au Parlement et aux Canadiens qu'il a mis de l'ordre dans ses affaires. Le Parlement a besoin d'un tableau global des résultats obtenus.

2.5 Le gouvernement doit adopter une démarche systématique pour écologiser ses opérations, afin d'assumer efficacement ses responsabilités en matière de gérance environnementale, de contribuer aux objectifs du développement durable, d'assurer la conformité avec la réglementation et de remplir ses engagements internationaux. La mise en oeuvre complète d'un système d'évaluation de la performance environnementale contribuera grandement à répondre à ce besoin.

2.6 La présente vérification fait partie d'un projet qui a débuté il y a trois ans. La vérification de cette année a pour objectif de donner au Parlement une évaluation des progrès accomplis par les ministères au regard de l'application de mesures de la performance environnementale des opérations gouvernementales. Nous nous attendons à ce que les résultats de cette vérification aident les ministères à mettre en oeuvre ces mesures et à améliorer l'information à fournir aux décideurs ministériels et au Parlement.

Les ministères ont répondu conjointement par l'entremise du Bureau du Conseil privé et ont indiqué leur accord avec les recommandations formulées dans le chapitre. Des discussions interministérielles sont en cours qui permettront de préciser le cadre de responsabilisation et le plan d'intervention requis pour assurer une communication plus uniforme de l'information sur les progrès accomplis. Dans sa réponse, Travaux publics et Services gouvernementaux Canada s'est engagé à travailler avec d'autres ministères pour améliorer l'évaluation de l'écologisation des opérations des ministères locataires dans les immeubles appartenant à l'État ou loués par celui-ci.

L'aide gouvernementale aux investissements dans le secteur de l'énergie

Chapitre 3 – Points saillants

3.1 Nous avons entrepris cette étude pour donner au Parlement de l'information détaillée sur l'aide accordée par le gouvernement fédéral aux investissements dans le secteur de l'énergie et pour déterminer si cette aide favorise le secteur des énergies non renouvelables. Nous nous sommes particulièrement intéressés à l'aide accordée par le truchement du régime fiscal, parce qu'elle est moins transparente que l'aide directe. Nous avons aussi voulu explorer les raisons pour lesquelles l'énergie produite à l'aide des sources d'énergie renouvelable, à l'exception des grands projets d'aménagement hydroélectrique, ne représente qu'une petite partie de l'ensemble des sources d'énergie disponibles au Canada. Nous voulions déterminer si les encouragements ou incitatifs fiscaux jouent un rôle déterminant à cet égard.

3.2 Dans l'ensemble, nous avons constaté que, à quelques exceptions près, l'aide accordée actuellement par le gouvernement fédéral aux investissements dans le secteur de l'énergie, y compris par le truchement du régime fiscal, ne favorise pas particulièrement le secteur des énergies non renouvelables par rapport au secteur des énergies renouvelables. Nous avons de plus constaté que, dans le passé, les gouvernements sont intervenus sur les marchés du secteur de l'énergie par l'intermédiaire de dépenses directes, de la réglementation et d'incitatifs fiscaux pour diverses raisons. La plupart des dépenses fédérales et des encouragements fiscaux se rapportent aux ressources non renouvelables, qui constituent la source prédominante d'énergie au Canada.

3.3 Toutes les formes d'énergie sont en concurrence avec de nombreuses autres possibilités d'investissement. Les investissements qui génèrent des taux de rendement plus élevés, qui ont des marchés établis et dont la capacité est éprouvée sont ceux qui attirent les investisseurs. La plupart des investisseurs interrogés au cours de notre enquête croient que de nombreux investissements dans les énergies renouvelables ne présentent pas actuellement ces caractéristiques. De même, les investissements dans le secteur des énergies renouvelables et de l'efficacité énergétique ont souvent une période de récupération trop longue pour avoir la préférence.

3.4 Le gouvernement fédéral a déclaré, dans sa Stratégie sur les énergies renouvelables de 1996, qu'il voulait augmenter les investissements dans les énergies renouvelables. Il affirme aussi, depuis de nombreuses années, souhaiter que les Canadiens utilisent l'énergie de manière plus efficiente. Compte tenu des obstacles que nous avons relevés, le gouvernement fédéral voudra peut-être envisager d'élaborer de nouvelles stratégies et approches qui permettront d'atteindre les objectifs qu'il a énoncés pour les investissements dans le secteur des énergies renouvelables et de l'efficacité énergétique.

Contexte et autres observations

3.5 En décembre 1997, le Canada et 160 autres pays ont négocié le *Protocole de Kyoto*, un accord sur les changements climatiques visant à réduire les émissions de six gaz à effet de serre importants, dont le dioxyde de carbone. (La principale source d'émissions de gaz anthropiques à effet de serre au Canada est la production et l'utilisation de combustibles fossiles tels que le pétrole, le gaz naturel et le charbon.) Pour sa part, le Canada s'est engagé à réduire ses émissions à six pour cent sous les niveaux de 1990 d'ici 2008–2012. Mais les émissions du Canada étaient déjà de 13 p. 100 supérieures aux niveaux de 1990 en 1997 et, selon les prévisions, elles devraient continuer d'augmenter. À moins que le Canada ne prenne de nouvelles mesures, Ressources naturelles Canada estime qu'en réalité, il nous faudra réduire nos émissions d'au moins 26 p. 100 par rapport aux niveaux prévus pour atteindre les objectifs du *Protocole de Kyoto*.

3.6 Pour les fins de la présente étude, les « sources d'énergie non renouvelable » comprenaient le pétrole, le gaz naturel et le charbon (qui sont des combustibles fossiles), et l'énergie nucléaire. Les « sources d'énergie renouvelable » comprenaient l'eau (les grands et les petits projets d'aménagement hydroélectrique), le vent, le soleil, la cellule photovoltaïque (l'énergie produite par l'exposition à la lumière de deux matières dissemblables), la biomasse (les végétaux et les déchets d'origine animale), l'éthanol, la puissance géothermique (l'énergie produite dans la Terre) ainsi que les vagues ou les marées.

3.7 Les gouvernements ont utilisé le régime fiscal pour encourager l'exploration et le développement de diverses sources d'énergie. La plupart des dispositions fiscales fédérales qui existent aujourd'hui permettent l'amortissement accéléré d'une dépense aux fins de l'impôt. Cela signifie que le contribuable réduit les impôts exigibles de l'exercice, mais qu'il paiera plus tard des impôts plus élevés. Les amortissements accélérés constituent un avantage surtout en raison de la « valeur temporelle » de l'argent. Les investisseurs qui peuvent réduire les impôts exigibles de l'exercice peuvent obtenir un taux de rendement plus élevé sur leur investissement et disposer de plus de liquidités pour d'autres investissements.

3.8 Lors de notre enquête, un taux de rendement adéquat sur les investissements était le facteur mentionné le plus fréquemment par les personnes à qui nous avions demandé d'évaluer le potentiel d'un projet d'investissement. Comme l'Agence internationale de l'énergie l'a fait remarquer, de nombreux projets d'exploitation d'énergies renouvelables ne donnent pas encore un taux de rendement suffisant pour constituer un investissement désirable. Il y a trois raisons à cela : les marchés sont difficiles à pénétrer; les produits dérivés des énergies renouvelables coûtent généralement plus que les produits dérivés des énergies non renouvelables; les périodes de récupération sont souvent plus longues.

Le smog

Un risque pour la santé

Chapitre 4 – Points saillants

Le smog est une grave menace pour la population canadienne

4.1 Depuis dix ans, le gouvernement fédéral rappelle régulièrement que le problème du smog au Canada est une importante question de santé publique, ainsi qu'une grave menace pour l'environnement. Son impact le plus significatif tient à ses effets nocifs sur la santé des Canadiens, surtout pour les membres les plus vulnérables de la société — les gens âgés, les enfants et les personnes souffrant de troubles cardiaques, de maladies pulmonaires ou d'autres problèmes respiratoires. Même les adultes en bonne santé sont vulnérables aux effets nocifs du smog.

4.2 Le gouvernement fédéral estime que la pollution atmosphérique peut être cause de 5 000 décès prématurés chaque année dans 11 grandes villes du Canada. Il s'agit là d'un chiffre relativement élevé quand on le compare à d'autres risques auxquels les Canadiens sont involontairement exposés. En outre, la pollution atmosphérique a, sur bien d'autres Canadiens, des effets moins graves mais plus généralisés, qui pourraient peser lourd sur le système de soins de santé. Ainsi, l'exposition au smog peut entraîner des problèmes respiratoires ou autres qui nuisent à la qualité de vie et à la condition physique. Parmi les autres effets possibles figurent un recours accru aux médicaments, une augmentation du nombre de consultations chez les médecins ou en salle d'urgence, ou même des hospitalisations.

4.3 Le smog affecte aussi les secteurs agricole et forestier du Canada. L'effet des polluants atmosphériques courants sur les cultures entraîne chaque année des pertes de millions de dollars dans le secteur agricole.

4.4 Selon une enquête réalisée en 1999 par Santé Canada, 24 p. 100 des Canadiens ont indiqué que la pollution atmosphérique était la plus grande menace environnementale pour leur province. De plus, 61 p. 100 d'entre eux se sont dits « très préoccupés » par les problèmes de qualité de l'air. Même si de nombreux Canadiens savent que le smog a des effets nocifs sur leur santé et leur environnement, il reste nécessaire d'accroître leur compréhension du problème et de leur apprendre comment y réagir.

On ne peut s'illusionner

4.5 Bien qu'on ait constaté une tendance à la baisse de certains polluants courants dans l'air ambiant, les niveaux semblent maintenant se stabiliser, voire augmenter. Les améliorations réalisées par le passé sont progressivement annulées par les hausses d'émissions résultant d'une augmentation de la consommation d'énergie.

4.6 Le gouvernement fédéral a indiqué que les connaissances scientifiques actuelles montrent très clairement l'urgence d'agir contre le smog. Les stratégies fédérales visant la pollution atmosphérique reposaient initialement sur la notion qu'il existait des seuils sous lesquels les principaux polluants du smog étaient sans danger. Cependant, des recherches plus récentes n'ont pas pu déterminer de niveau sécuritaire pour l'ozone ou les particules.

4.7 Environnement Canada s'attend à ce que la qualité de l'air continue de se détériorer, à moins que les gouvernements, l'industrie et les Canadiens unissent leurs efforts en vue de réduire le smog.

Un bon départ, mais sans suite

4.8 En 1990, le Conseil canadien des ministres de l'environnement entérinait un plan national en trois phases visant à réduire les concentrations de polluants. Le plan se concentrait sur les oxydes d'azote (NOx) et les composés organiques volatils (COV). Ces deux groupes de substances mènent à la formation d'ozone, importante composante du smog. L'objectif du plan national était de « résoudre complètement » les problèmes de l'ozone au Canada d'ici 2005.

4.9 Nous sommes convaincus que le Plan de gestion pour les oxydes d'azote (NOx) et les composés organiques volatils (COV) est une importante réalisation des gouvernements fédéral, provinciaux et territoriaux et qu'il fournit une orientation stratégique efficace pour régler le problème du smog au Canada.

4.10 Cependant, après avoir entériné le Plan, les partenaires ne se sont jamais entendus sur les détails d'un cadre de mise en oeuvre. Le Plan a évolué depuis dix ans sans présenter aucun des éléments clés d'une saine gestion.

4.11 Les ministres de l'environnement avaient convenu au départ de négocier, dans les 12 mois des ententes de partenariat fédéral-provincial, les rôles de chacun et les échéanciers. Ces ententes ne s'étant pas matérialisées, le Plan était voué à l'échec. Aucun régime de responsabilisation adéquat n'a été mis en place afin de clarifier les rôles, les responsabilités et le rendement attendu de chaque ordre de gouvernement. Aussi est-il difficile pour la population et le Parlement de savoir qui tenir responsable si le Plan échoue.

4.12 Bien que le Plan de 1990 n'ait jamais été mis en oeuvre selon l'idée d'origine, le gouvernement fédéral s'est acquitté de la plupart des engagements pris dans la première des trois phases du Plan. Cependant, sa contribution à la réduction des émissions devait être modeste comparativement à l'ampleur du problème. Aux termes du Plan, les efforts des autres parties devaient permettre de réaliser la majeure partie des réductions d'émissions.

4.13 Environnement Canada n'a pas fourni au public ni au Parlement des informations valides, exhaustives et à jour sur la suite donnée aux promesses faites aux Canadiens en 1990 et sur les résultats des efforts nationaux. Du fait de cette absence d'information transparente, ni le public ni le Parlement ne peuvent déterminer si le Canada s'attaque à son problème de smog à un rythme raisonnable.

4.14 Le gouvernement fédéral reconnaît que, malgré des années d'effort national, les progrès ont été plus lents que prévu, et que l'échéance cible initiale ne sera probablement pas respectée. De plus, on doit se pencher sur de nouveaux problèmes de pollution et réduire de façon importante les niveaux des polluants causant le smog. Environnement Canada s'est prononcé publiquement sur la nécessité de prendre d'urgence des mesures prioritaires pour régler ce problème chronique et persistant.

Quelle direction prendre?

4.15 Aucun ordre de gouvernement ni secteur de l'industrie ne pourra à lui seul régler le problème du smog. Il n'y a pas non plus de solution unique; la question du smog exigera un effort concerté à long terme de la part de tous les Canadiens. Il faudra développer des ententes qui soient efficaces dans ce contexte difficile. Le Canada aura besoin d'un leadership fort de la part du gouvernement fédéral pour encourager les activités de coopération dans tous les secteurs de la société.

4.16 En tant que leader fédéral dans la protection de la qualité de l'air au Canada, Environnement Canada a une responsabilité qui ne se limite pas à ses propres mesures de réduction du smog et à sa coordination des activités fédérales. Le Ministère a aussi pour tâche de faciliter la collaboration entre les administrations fédérale, provinciales et territoriales, et de coopérer avec ses partenaires pour élaborer des stratégies et des plans nationaux efficaces.

4.17 Le gouvernement fédéral a déterminé l'importance d'utiliser un large éventail d'instruments pour réduire le smog. Cependant, il a surtout compté sur la coopération volontaire des autres instances et n'a utilisé les instruments réglementaires que de façon très sélective. Il doit donc élaborer une approche fédérale détaillée qui répondra complètement au problème des sources de polluants liés au smog.

4.18 L'approche utilisée pour la collaboration entre le fédéral, les provinces et les territoires s'est révélée sans efficacité pour atteindre les résultats promis aux Canadiens aux termes du Plan de 1990. Il reste à voir si le nouveau processus de standards pancanadiens aux termes de l'Accord pancanadien sur l'harmonisation environnementale de 1998 sera plus efficace. Reste à voir également si ce processus permettra de mieux rendre compte des résultats et de faire preuve de transparence dans la communication d'informations à la population et au Parlement.

Contexte et autres observations

4.19 Le smog est un problème difficile et complexe. Le smog est formé de divers polluants provenant de sources nombreuses et différentes. Il traverse les frontières et affecte les gens de diverses manières. Bien qu'on le définisse par ses principales composantes, l'ozone et les particules, il y a un « panier » de polluants qui contribuent à la formation du smog, dont les oxydes d'azote, les composés organiques volatils, le dioxyde de soufre et le monoxyde de carbone.

4.20 Les polluants atmosphériques qui causent aujourd'hui le smog sont en grande partie des sous-produits d'activités industrielles et de l'utilisation de combustibles fossiles (pétrole, gaz naturel et charbon). Plusieurs solutions au problème du smog exigeront des Canadiens qu'ils changent la façon dont l'énergie est produite et utilisée.

4.21 Environnement Canada a pris le leadership fédéral et national, et représente le Canada sur la scène internationale. Au Canada, cependant, la responsabilité de réglementer ou de gérer tous les aspects de la réduction du smog ne relève pas d'une compétence unique. Bien que le gouvernement fédéral s'efforce de réduire le smog à l'échelle nationale, la participation des provinces, des territoires et des municipalités influera fortement sur la vitesse des progrès réalisés.

4.22 Pour aider à évaluer les progrès futurs, le gouvernement fédéral doit collaborer avec les provinces et territoires pour déterminer les besoins du Réseau national de surveillance de la pollution atmosphérique et en établir les priorités. Dans les engagements à venir, les parties devront déterminer leurs rôles et responsabilités respectifs quant à l'entretien et à l'amélioration du Réseau.

4.23 Voilà dix ans que les ministres fédéral, provinciaux et territoriaux responsables de l'environnement ont déterminé que le smog était une menace sérieuse pour la santé publique et l'environnement, mais leurs administrations en sont encore à élaborer des stratégies et des plans nationaux de lutte contre le smog. Elles envisagent d'adopter de nouveaux standards pour l'ozone et les particules, mais les échéances proposées sont bien lointaines.

4.24 Bien que les solutions au problème du smog aient souvent semblé hors d'atteinte pour le Canada, l'espoir reste permis. Le Canada a pris des mesures pour réduire certaines des composantes du smog, et a connu certains succès dans l'amélioration de la qualité de l'air en général. Les gouvernements et l'industrie ont fait la preuve qu'ils peuvent s'attaquer à des problèmes difficiles de pollution atmosphérique, et l'on devrait pouvoir obtenir des résultats similaires dans le cas du smog.

La réponse d'Environnement Canada est intégrée au présent chapitre. Le Ministère convient que le smog est un important problème de santé publique qui nécessite la poursuite d'une action concertée et des investissements soutenus. Il indique également l'importance d'intégrer des principes de gestion judicieuse dans les futures ententes conclues dans le cadre des standards pancanadiens relatifs aux particules et à l'ozone. Le Ministère est déterminé à présenter de l'information significative et en temps opportun sur les objectifs de rendement et les résultats obtenus.

Des partenariats pour le développement durable

Aperçu

Chapitre 5 – Points saillants

5.1 Certains des défis les plus pressants que doivent relever les gouvernements aujourd'hui se rattachent aux mandats de plusieurs ministères et à plusieurs champs de responsabilité politique. Pour relever ces défis, les gouvernements cherchent de plus en plus à conclure des ententes de partenariat pour l'élaboration des politiques et l'exécution des programmes.

5.2 La gestion de ces relations de travail — au sein des gouvernements, entre eux et avec les autres partenaires — pose un défi particulier. Pour que les mécanismes de collaboration soient efficaces et que les partenaires travaillent ensemble à l'atteinte d'objectifs communs, certaines caractéristiques sont souhaitables. Les éléments fondamentaux d'un cadre pour ces mécanismes sont les suivants : des rapports crédibles, une reddition de comptes efficace, des processus transparents et la protection de l'intérêt public. Les participants à de tels mécanismes ont cerné eux-mêmes cinq principaux facteurs de succès : des objectifs et des résultats attendus clairs et réalistes; des buts partagés ou complémentaires; des personnes efficaces et engagées; des avantages évidents pour les organisations participantes; et l'intérêt, le soutien et l'engagement de la haute direction.

5.3 Pour gérer efficacement leurs relations de travail, les ministères doivent adopter une perspective plus vaste de ce qui constitue le succès, en attachant plus d'importance à la reddition de comptes. Ce n'est pas que les intéressés ne savent pas comment établir et maintenir des relations de travail et ce qu'il faut pour assurer la reddition de comptes; le défi est plutôt de passer de la théorie à la pratique. Le Bureau du Conseil privé et le Secrétariat du Conseil du Trésor ont des rôles importants à jouer pour s'assurer que les ministères comprennent les principes et les éléments d'une bonne relation de travail et qu'ils les appliquent.

Contexte et autres observations

5.4 Dans les secteurs où la responsabilité est partagée, comme la protection de l'environnement et la promotion du développement durable, la coopération et la coordination sont essentielles à l'atteinte d'objectifs stratégiques communs. Même lorsqu'elles ne sont pas essentielles, elles sont souhaitables — les partenariats peuvent aussi améliorer l'efficience et l'efficacité des programmes. Sans coopération ni coordination, des expertises et des points de vue pertinents peuvent ne pas être considérés adéquatement dans la prise de décisions. Les problèmes peuvent être mal définis, les priorités, mal établies, et les politiques, ne pas être appliquées.

5.5 Le présent chapitre ainsi que les trois chapitres suivants portent sur l'établissement et le maintien de relations de travail efficaces pour protéger l'environnement et promouvoir le développement durable. Le chapitre 6 traite des modalités de travail au sein de l'administration fédérale; le chapitre 7, des relations fédérales-provinciales et le chapitre 8, des partenariats entre le secteur public et le secteur privé. Ces chapitres présentent ensemble les résultats de 17 études de cas d'organisations qui collaborent pour atteindre des objectifs communs dans des domaines comme la biotechnologie, les pluies acides, la foresterie et l'exploitation minière.

Le chapitre présente la réponse conjointe du Bureau du Conseil privé et du Secrétariat du Conseil du Trésor. Ceux-ci sont d'accord avec notre recommandation et notent que des initiatives sont en cours pour renforcer la capacité de gestion et d'élaboration des enjeux stratégiques horizontaux.

Travailler ensemble au sein de l'administration fédérale

Chapitre 6 – Points saillants

6.1 L'approche unique du Canada pour parvenir au développement durable exige que les ministères fédéraux travaillent bien ensemble. Ils peuvent avoir recours à une foule de mécanismes, allant de la création de nouvelles organisations jusqu'à des ententes de partage des coûts en passant par des réseaux à participation volontaire d'échange d'information. Nous nous sommes servis de six études de cas pour examiner les principaux facteurs de succès de ces mécanismes.

6.2 Nous avons constaté que les ministères doivent définir clairement « qui fait quoi ». Parmi les principaux domaines qui posent problème figurent les suivants : objectifs flous, responsabilités mal définies, obligations de rendre compte vagues et mécanismes de règlement des différends qui laissent à désirer. Pour connaître le succès, il faut aussi gérer les effets du roulement des participants, voir à ce que les ministères aient des raisons de collaborer et prêter suffisamment d'attention aux résultats de la surveillance et de l'évaluation pour tirer des leçons de l'expérience passée.

6.3 L'efficacité de la coordination interministérielle est limitée par le fait que les ministères sont incapables de forcer les autres ministères à agir, sauf par la persuasion et la négociation. Les principaux organismes centraux, le Bureau du Conseil privé et le Secrétariat du Conseil du Trésor, peuvent avoir un rôle indispensable à jouer dans l'atteinte d'une perspective à l'échelle de l'administration fédérale.

Contexte et autres observations

6.4 Notre première étude de cas porte sur la Stratégie canadienne en matière de biotechnologie; renouvelée récemment, elle fait intervenir plus de 20 ministères et organismes en plus de permettre la création d'un nouveau secrétariat. La nouvelle Stratégie est le fruit d'un processus de consultation réussi, mais elle se trouve actuellement aux prises avec des rôles et des responsabilités flous, une bureaucratie plus lourde et des faiblesses administratives. Aucun plan d'action concret et aucun plan d'évaluation n'ont encore été rendus publics.

6.5 Ressources naturelles Canada et Affaires indiennes et du Nord Canada font la promotion de débouchés économiques basés sur les forêts pour les collectivités des Premières nations. Le succès du programme repose sur des objectifs clairs et sur une structure de gestion souple. Par exemple, d'autres organisations ont fourni 21 millions de dollars de plus que les niveaux initialement prévus. Nous avons déterminé que la coordination avec les autres ministères et le suivi des résultats devaient être améliorés.

6.6 L'administration fédérale s'est engagée à tenir compte de l'environnement lorsqu'elle s'approvisionne (chaque année, elle achète des produits et services valant plus de 14 milliards de dollars). L'administration doit adopter une approche coordonnée au niveau central si elle veut atteindre cet objectif tout en assurant la meilleure valeur possible aux contribuables. Malgré les efforts de coordination répétés au cours des dix dernières années, les politiques ministérielles sont insuffisantes ou inexistantes, les efforts font double emploi et les rôles et les responsabilités ne sont pas clairs. À notre avis, le Secrétariat du Conseil du Trésor doit jouer un rôle de premier plan dans la coordination.

6.7 Le Canada a joué un rôle clé dans les négociations internationales visant à réglementer le mouvement transfrontalier d'organismes vivants génétiquement modifiés. Un groupe de travail interministériel a réussi à préparer une position de négociation malgré des enjeux de taille, des incidences incertaines et des perspectives conflictuelles. Les ministères ont passé par un processus long et difficile au cours duquel les différends n'ont pas toujours été réglés efficacement. À notre avis, l'administration fédérale doit adopter une approche stratégique pour gérer les tensions entre les objectifs commerciaux et environnementaux.

6.8 Sous la direction d'Environnement Canada, les ministères ont travaillé ensemble et avec d'autres parties intéressées pour évaluer les effets des effluents liquides des mines de métaux. L'efficacité de la planification, la neutralité du secrétariat, l'excellence du mécanisme de règlement des différends et le caractère approprié des ressources ont contribué au succès de l'entreprise. Ce succès repose sur l'expérience acquise au moment de la préparation du règlement sur les effluents des fabriques de pâtes et papiers.

6.9 Dans la dernière étude de cas, nous avons examiné la coordination entre les ministères quant à leur stratégie de développement durable. Les premières stratégies déposées par les ministères n'ont pas été bien coordonnées sur le plan du contenu, du partage des engagements et du processus de consultation. Le Réseau interministériel sur les stratégies de développement durable facilite l'échange d'information et la coordination entre les ministères pour la deuxième génération de stratégies. L'efficacité du Réseau est toutefois limitée du fait qu'il s'agit d'un mécanisme à participation volontaire, que les relations hiérarchiques ne sont pas claires et que le roulement des participants est élevé.

Les réponses des ministères et organismes à nos recommandations sont incluses dans le chapitre. Les ministères et organismes sont d'accord avec les recommandations et ils décrivent les mesures qu'ils comptent prendre à l'égard de certaines d'entre elles.

La coopération entre les gouvernements fédéral, provinciaux et territoriaux

Chapitre 7 – Points saillants

7.1 Puisque la compétence en matière d'environnement est fondée sur le partage des responsabilités, une étroite coopération entre les gouvernements fédéral, provinciaux et territoriaux est nécessaire. Des ententes de coopération fructueuses reposent sur un ensemble de considérations à la fois subjectives et objectives. Les études de cas dont il est question dans le présent chapitre montrent l'importance de relations où les partenaires créent et maintiennent entre eux un climat de confiance. Elles soulignent que le leadership et l'engagement de toutes les parties en cause de même que l'appui du public et du milieu politique sont essentiels. Enfin, elles confirment que les partenaires doivent exercer la discipline requise pour franchir toutes les étapes nécessaires durant le cycle de vie d'une entente. Pour qu'une entente de coopération soit fructueuse, il faut d'abord et avant tout remplir la totalité ou la majorité de ces conditions.

7.2 Avant de conclure une entente, les futurs partenaires doivent être persuadés que l'enjeu est important et qu'un partenariat est probablement la meilleure façon de s'y attaquer. Ils doivent reconnaître leurs compétences respectives et tenir compte de la capacité de leurs partenaires éventuels d'atteindre les résultats escomptés. Enfin, ils doivent consulter et mettre à contribution toutes les organisations dont l'engagement est essentiel à la réalisation des objectifs de l'entente. Si les partenaires ne remplissent pas ces conditions, il leur sera peut-être possible d'arriver à une entente, mais ils n'obtiendront vraisemblablement pas les résultats escomptés.

7.3 Dans la conception de l'entente, les questions d'obligation redditionnelle entre les partenaires deviennent importantes. L'entente précise-t-elle des objectifs clairs, communs ou complémentaires, des calendriers et les résultats prévus, ainsi que des rôles et des responsabilités clairs? Existe-t-il des dispositions appropriées pour coordonner, contrôler et rendre compte du rendement, de même que pour évaluer et modifier l'entente s'il y a lieu?

7.4 Lors de la mise en oeuvre de l'entente, les partenaires doivent respecter leurs engagements. Chaque partenaire doit produire le plus tôt possible un plan d'action qui définit des rôles et des responsabilités clairs au sein de sa propre organisation et fixe des cibles et des calendriers. Les partenaires doivent aussi intégrer les objectifs de l'entente dans leurs politiques et leurs opérations. Enfin, ils doivent coordonner les activités, surveiller les résultats et soumettre en temps opportun des rapports transparents sur la performance.

7.5 Les études de cas donnent aussi des exemples des relations dites « strictes-souples » dont il est question au chapitre 5 du présent rapport. Ces relations sont « strictes » quant aux résultats que les partenaires doivent atteindre selon l'entente intergouvernementale, et « souples » quant à la façon d'atteindre ces résultats dans les circonstances propres à chaque gouvernement.

Contexte et autres observations

7.6 L'environnement — comme de nombreux autres aspects du développement durable — est un champ de compétence partagée entre les gouvernements fédéral et provinciaux. Ce sujet n'est pas mentionné expressément dans la Constitution. Cependant, les deux ordres de gouvernement possèdent des pouvoirs constitutionnels sur diverses questions qui leur permettent d'adopter des lois régissant les enjeux environnementaux. Dans nos rapports précédents, nous avons reconnu que, dans les champs de compétence partagée, la gestion est une tâche complexe.

7.7 Ce chapitre présente cinq études de cas où les gouvernements fédéral, provinciaux et territoriaux travaillent ensemble à des enjeux de développement durable : le Programme de lutte contre les pluies acides dans l'Est du Canada, la Stratégie nationale sur les forêts, le Plan nord-américain de gestion de la sauvagine, l'Engagement formel de compléter le réseau canadien des aires protégées, de même que le Projet pilote d'échange de réductions des émissions de gaz à effet de serre.

Travailler avec le secteur privé

Chapitre 8 – Points saillants

8.1 Le but de notre étude était d'attirer l'attention du Parlement sur l'utilisation de mécanismes de coopération mettant à contribution le gouvernement et le secteur privé, lesquels devraient permettre d'atteindre des buts environnementaux et d'autres buts plus vastes liés au développement durable. Il y a eu un accroissement de l'utilisation de ce genre de mécanismes qui comprennent, entre autres, la négociation de règles, des modalités d'observation plus souples des lois et des règlements, des codes de conduite volontaires et des ententes.

8.2 La crédibilité et l'efficacité de ces mécanismes de coopération et la reddition de comptes à leur égard suscitent des préoccupations. Ces mécanismes sont relativement nouveaux; on ne peut donc tirer de conclusions générales sur leur efficacité. Nous avons pris note de leurs avantages et des défis qu'ils posent, ainsi que des leçons que l'on peut tirer pour les améliorer.

8.3 Les mécanismes de coopération offrent des solutions prometteuses et novatrices pour résoudre bon nombre des problèmes liés à l'établissement des priorités, à l'équité et à l'efficience que pose une approche fondée sur les principes du développement durable. Cependant, il faut établir ces mécanismes et les mettre en oeuvre avec soin. Ils ne constituent qu'une façon de concrétiser la politique de l'État et ne permettent pas de résoudre tous les problèmes. Ils sont d'une grande efficacité lorsqu'ils sont utilisés dans un cadre solide de réglementation et d'observation des lois et règlements.

8.4 Le gouvernement ne peut déléguer l'obligation qu'il a de rendre compte de l'atteinte des objectifs de la politique de l'État et de la mesure dans laquelle il assure la protection de l'intérêt public. Pour rendre compte des résultats des mécanismes de coopération, le gouvernement doit fixer des objectifs clairs, établir des processus de gestion et de rapport pour assurer la transparence, puis mener des consultations afin d'identifier les participants et les autres groupes d'intérêts.

Contexte et autres observations

8.5 Les études de cas, dans le présent chapitre, attirent l'attention sur l'utilisation novatrice des mécanismes de coopération pour trouver des solutions aux problèmes environnementaux et à ceux plus vastes liés au développement durable, mettre en oeuvre ces solutions et contribuer à la réalisation du programme d'élaboration des politiques. Elles font ressortir les possibilités et les défis qu'offre un éventail d'instruments d'intervention de l'État allant de l'amélioration de l'efficacité de la réglementation à la promotion d'une approche de gestion faisant valoir l'utilité qu'il y aurait à adopter un processus décisionnel intégré.

8.6 Nous indiquons comment les mécanismes de coopération peuvent permettre aux organismes du secteur public et du secteur privé d'aller au-delà de leurs compétences de base et de rejoindre une clientèle autre que leur clientèle habituelle. En réunissant un éventail de ressources, de points de vue et de compétences, les parties peuvent atteindre leurs objectifs plus efficacement. Elles peuvent trouver ensemble des solutions nouvelles et novatrices qui tiendront compte des préoccupations des différents groupes d'intérêts.

8.7 Les initiatives de coopération posent un certain nombre de défis. Il faut veiller à ce que les objectifs des divers contributeurs soient compatibles et à ce que les initiatives offrent des avantages à chacun d'entre eux. Obtenir les ressources requises, trouver les bons participants, établir des relations utiles entre eux et créer un climat de confiance exigent du temps et de la patience. De plus, pour qu'ils puissent s'entendre sur leurs responsabilités et leurs rôles respectifs, les participants doivent avoir à coeur la réalisation des initiatives proposées et faire preuve de minutie.

Suivi de vérifications antérieures : il faut faire davantage

Chapitre 9 – Points saillants

9.1 Le suivi a pour objet d'informer le Parlement au sujet des mesures qu'ont prises les ministères fédéraux pour donner suite aux observations et recommandations antérieures du vérificateur général et du commissaire à l'environnement et au développement durable. Le présent chapitre de suivi fait rapport sur l'état d'avancement de quatre vérifications distinctes.

9.2 Nous ne sommes pas satisfaits des progrès réalisés dans l'ensemble par les ministères fédéraux quant aux constatations du chapitre 4 du Rapport du vérificateur général d'avril 1997, « Le contrôle des mouvements transfrontaliers des déchets dangereux ». Le Canada n'est toujours pas en mesure de savoir jusqu'où il respecte ses obligations internationales en matière de prévention du trafic illicite de déchets dangereux à la frontière et il n'a pas de plan d'action pour combler les lacunes importantes.

9.3 Nous sommes satisfaits des progrès réalisés par les ministères en ce qui a trait aux constatations du chapitre 27 du Rapport du vérificateur général de décembre 1997, « Protection de la couche d'ozone : le parcours inachevé ». Environnement Canada, qui est le ministère chef de file, a fait preuve d'un engagement ferme et de leadership, tant à l'étranger qu'au Canada, dans l'élaboration de politiques et de programmes visant à éliminer ou à réduire les substances appauvrissant la couche d'ozone (SACO). Le Canada continue de remplir ses obligations financières et ses obligations internationales en ce qui concerne l'élimination progressive des substances concernées; il exécute, avec les provinces, un programme national de récupération et de recyclage des SACO. Environnement Canada doit faire d'autres progrès pour ce qui est d'appliquer les règlements sur les SACO adoptés en vertu de la *Loi canadienne sur la protection de l'environnement*, d'établir une orientation pour les ministères fédéraux et de planifier l'avenir.

9.4 Le programme d'application de la loi d'Environnement Canada continue d'être une source importante de préoccupations. Nous avons examiné les activités d'application de la loi lors des vérifications des mouvements transfrontaliers des déchets dangereux et de la protection de la couche d'ozone. Au cours de notre suivi, nous avons constaté, pour un bon nombre des activités liées à l'application de la loi, peu d'amélioration, sinon aucune. Environnement Canada nous a fourni des données contradictoires sur les activités d'inspection à la frontière.

9.5 Quant au chapitre 4 du Rapport du commissaire à l'environnement et au développement durable de mai 1998, « La biodiversité au Canada : le temps presse », nous sommes satisfaits dans l'ensemble des progrès qu'ont réalisés les ministères. Nous reconnaissons que la mise en oeuvre de la *Stratégie canadienne de la biodiversité* est une tâche complexe. Les ministères se rendent compte qu'ils doivent faire encore beaucoup plus aux niveaux fédéral et national pour intégrer pleinement la biodiversité à leurs programmes et politiques.

9.6 Nous croyons que l'Agence canadienne d'évaluation environnementale a pris des mesures raisonnables pour donner suite aux constatations qui la concernent dans le chapitre 6 du Rapport du commissaire de 1998. Dans l'ensemble, toutefois, nous ne sommes pas satisfaits des progrès qu'ont réalisés les ministères pour combler les lacunes relevées.

Rapport du commissaire à l'environnement et au développement durable à la Chambre des communes – 2000

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CANADA

Report of the

Commissioner of the Environment and Sustainable Development

to the House of Commons

Managing for Sustainable Development

Chapter 1

Implementing Sustainable Development Strategies:
Year Two – Work in Progress

Chapter 2

Greening Government Operations:
When Will the Government Measure Up?

Chapter 3

Government Support for Energy Investments

2000

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© Minister of Public Works and Government Services Canada 2000
Cat. No. FA1–2/2000–3E
ISBN 0–662–28970–6
Copies françaises aussi disponibles

EcoLogo^{M} Paper / Papier Éco–Logo^{M}

Chapter 1

Implementing Sustainable Development Strategies: Year Two

Work in Progress

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies and practices of the Office of the Auditor General. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants. The numbered paragraphs in bold face represent recommendations.

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Implementing Sustainable Development Strategies: Year Two

Work in Progress

Main Points

1.1 The information that most departments provided in their second annual progress reports on sustainable development strategies continued to fall well short of the information specified in the Treasury Board's Guideline for the Preparation of Departmental Performance Reports to Parliament. Thus, parliamentarians, Canadians and other stakeholders will find it difficult to judge whether the strategies are on track or whether corrective action is required. We expect that the quality of reporting will improve as departments adopt a more systematic approach to managing strategy implementation.

1.2 Overall, strategy implementation seems to be progressing. Based on our assessment of the information reported by departments in 1999, they met about 20 percent of the commitments set out in the sustainable development strategies, compared with 11 percent in 1998. Departments are also working on their management practices for implementing the strategies. Last year we reported that, on average, departments had established about one third of the management practices reflected in the ISO 14001 management standard, which is a benchmark of good practice. This year, on average, the six departments we examined were applying about half of those practices.

1.3 However, in four of the six departments, the management practices do not yet provide reasonable assurance that their strategies will be implemented consistently and achieve the intended results. We continue to believe that departments should establish and apply a management systems approach to support the implementation of their strategies.

Background and other observations

1.4 In 1997, 28 federal government departments and agencies tabled their first sustainable development strategies in the House of Commons. Since then, they have been working to implement their strategies. Departments are required to report annually to the House on their progress. This chapter provides the Commissioner's second annual assessment of that progress.

1.5 In his 1998 report, the Commissioner recommended that departments establish clear and measurable targets that they, parliamentarians and the public could use to judge whether or not the strategies are being implemented successfully. This year we reviewed the departments' revised targets to determine whether they had clearly stated the criterion or measure of success for each target and indicated an expected completion date. About 50 percent of the revised targets include a clearly stated criterion or measure of success and an expected completion date. Only 45 percent of departments included targets and performance indicators in their performance reports.

1.6 Last year we examined the management practices that six departments were following to implement their sustainable development strategies. As a benchmark of good practice, we used the ISO 14001 standard for environmental management systems. This year, using the same benchmark, we assessed the management practices of another six departments. In four of them we found significant gaps between their practices and the ISO standard. These four departments are still in the early stages of establishing a systematic approach to strategy implementation. They have not yet adopted a systematic approach to identifying their priorities, defining management expectations, assigning accountability for results at lower levels in the organization and identifying related training needs, or performing the self-assessments that would facilitate steady improvement.

Introduction

1.7 The position of Commissioner of the Environment and Sustainable Development was created by amendments to the *Auditor General Act* in 1995. The Commissioner's principal duty under the Act is to monitor and report annually to Parliament on the extent to which departments have implemented their action plans for sustainable development and met their objectives.

1.8 In 1997, 28 federal departments had their first sustainable development strategies tabled in the House of Commons. The objective of the strategies was to put the concept of sustainable development into practice by articulating what each major department across the federal government needed to do.

1.9 The strategies contained each department's action plan, including the objectives and targets that the department and others would use as benchmarks for measuring progress. To ensure accountability for results, ministers were directed to report in their annual departmental performance reports to Parliament on progress toward their sustainable development commitments.

1.10 In October 1999, ministers tabled their second annual sustainable development strategy progress reports, based on progress to 31 March. The purpose of these reports is to inform parliamentarians whether the departmental strategy is on track and, if not, what is being done to get it back on track.

1.11 This is the Commissioner's second report on the progress being made by departments. Our objectives are to give parliamentarians information they need to oversee departments' progress in implementing their sustainable development strategies and to help departments understand their management obligations and good practices for meeting them.

Focus of the audit

1.12 In conducting the audit, we set out to answer two main questions: "Are federal departments doing what they said they would do in their strategies?" and "Have departments established the capacity to implement their strategies?"

1.13 To determine whether departments are doing what they said they would do, we compared the goals, objectives, targets and actions set out by each department in its 1997 strategy with the performance information each presented in its October 1999 progress report. We accepted at face value the departments' assertions about the progress they had made.

1.14 We reviewed the strategies and the departmental performance reports of 28 departments (see Exhibit 1.1). We requested copies of any additional, more detailed sustainable development progress reports that departments had prepared, and we also reviewed these.

Are departments doing what they said they would do? Have they established the capability to get the job done?

1.15 Last year, to examine departments' capacity to implement their sustainable development strategies, we compared six departments' related management practices with recognized standards of good management practice. This year we chose another six departments and repeated the process.

1.16 The departments we selected represent a cross-section of policy, program and operational mandates: Solicitor General Canada, Economic Development Agency of Canada for Quebec Regions, Department of Fisheries and Oceans, Canadian Heritage, Canada Customs and Revenue Agency and Western Economic Diversification Canada.

1.17 We believe it is results that matter to parliamentarians and Canadians, not the systems or procedures that produce them. However, the Commissioner has regularly observed that there is a persistent gap between the commitments

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made by departments and the results they achieve. He has referred to this as "the implementation gap". Our current emphasis on good management practices is founded on the premise that they go hand in hand with good results. Our approach is intended to reinforce good management practices, which we believe will contribute to achieving expected results over the long term. We expect that the implementation gap will begin to close as federal departments apply a management systems approach to implementing their strategies and reporting results.

Our current emphasis on good management practices is founded on the premise that they go hand in hand with good results.

1.18 The criteria we used to assess the management capacity of the six departments reflect the principles set out by the International Organization for Standardization (ISO) in its environmental management system standard 14001. The ISO 14001 standard is a widely accepted benchmark of good management practice and due diligence. The standard is consistent with the Treasury Board Secretariat's principles of good management for planning, reporting and accountability structures.

1.19 Additional details on the audit can be found in **About the Audit** at the end of this chapter.

Observations and Recommendations

What Ministers and Their Departments Were Asked to Do

1.20 The annual departmental performance reports are the key means of documenting and communicating the progress of federal departments in implementing their sustainable development strategies. The process of preparing them informs management where the department stands in relation to its objectives and identifies opportunities for improvement. The reports are thus the key mechanism for keeping the sustainable development strategies on track. They are also an important tool for the Commissioner of the Environment and Sustainable Development and others interested in monitoring the progress of the 28 departments.

1.21 To help departments prepare their performance reports, the Treasury Board Secretariat published its Guideline for the Preparation of Departmental Performance Reports to Parliament (see Exhibit 1.2). The Guideline clearly specifies the sustainable development performance information that departments should

Exhibit 1.1

Departments That Tabled Sustainable Development Progress Reports

- Agriculture and Agri-Food Canada
- Atlantic Canada Opportunities Agency
- Canada Customs and Revenue Agency
- Canadian Environmental Assessment Agency
- Canadian Heritage
- Canadian International Development Agency (CIDA)
- Citizenship and Immigration Canada
- Correctional Service Canada
- Economic Development Agency of Canada for Quebec Regions
- Environment Canada
- Department of Finance
- Fisheries and Oceans
- Foreign Affairs and International Trade
- Health Canada
- Human Resources Development Canada
- Indian and Northern Affairs Canada
- Industry Canada
- Department of Justice
- Department of National Defence
- Natural Resources Canada
- Office of the Auditor General of Canada
- Public Works and Government Services Canada
- Royal Canadian Mounted Police
- Solicitor General Canada
- Transport Canada
- Treasury Board Secretariat
- Veterans Affairs Canada
- Western Economic Diversification

include in their reports for parliamentarians and others interested in monitoring the government's progress toward sustainable development.

1.22 Specifically, the annual progress reports are expected to contain five pieces of information: the key commitments set out by departments in their strategies; the indicators or measures that departments and others can use to gauge progress toward those commitments; the targets the departments expected to achieve during the reporting period; a summary of accomplishments related to each target; and corrective actions being taken to ensure that commitments are met. The summary information provided in the departmental performance reports is also to be cross-referenced to other documents to allow access to more detailed information.

1.23 In his 1998 Report, the Commissioner concluded that almost all departments had failed to establish the clear and measurable targets that are key to the success of the sustainable development strategy process. To rectify this, he asked departments to review their strategies and to establish a clear set of targets that they, parliamentarians and the public could use to judge whether or not the strategies are being implemented successfully.

What Departments Did

1.24 All departments that tabled a sustainable development strategy in 1997 also tabled a sustainable development progress report as a subsection of their October 1999 departmental performance reports. We assessed the extent to which the reports provided the information requested by the Treasury Board Secretariat in its Guideline. We found that the extent to which departments followed the Guideline varied, and so did the quality of the information in the reports (see Exhibit 1.3).

Exhibit 1.2

Guideline for the Preparation of Departmental Performance Reports to Parliament for the Period Ending 31 March 1999

The purpose of the Sustainable Development Strategies (SDS) subsection is to apprise parliamentarians of progress made against commitments since the SDS was submitted, and any corrective action being taken. In other words, whether the organization is on track or not, and if not, what will be done to get it back on track? Updates or further development of components of the SDS should be noted.

Departments should report on specific results of SDS initiatives where appropriate in the body of their report. In addition, a brief summary narrative or a listing of where the information can be found (or both) should be included here. To facilitate reporting and encourage a logical flow of information, departments should report the following information in a narrative of about a half-page in length (and not more than one page):

1. **key goals/objectives/long-term targets;**
2. **performance indicators or performance measurement strategy;**
3. **targets for the reporting period;**
4. **progress to date; and**
5. **any corrective action.**

Where commitments are shared across departments, this should be noted and interdepartmental discussions should be held to ensure consistency in reporting. A substantial investment of resources in the SDS, as a whole, or in specific initiatives, if identifiable, could be highlighted as well.

Because only highlights are included, these should be referenced so that the reader of the DPR is able to access sources of additional information (e.g. reports, other publications, and Internet addresses).

Source: Treasury Board Secretariat

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Source: Treasury Board Secretariat

1.25 We also reviewed the revised targets that departments presented in response to the Commissioner's 1998 recommendation. Performance targets provide a point of reference against which progress can be measured. They need to be specific about the expected results, including measures or indicators of success as well as completion dates.

1.26 This year about 45 percent of departments included targets and performance indicators in their progress reports, compared with 35 percent last year. About half of the targets we reviewed had a completion date and a clear measure or indicator of success.

Departments frequently described the activities they had undertaken but generally did not indicate whether they had met the targets.

1.27 Departments frequently described the activities they had undertaken but generally did not indicate whether they had met the targets. Very few departments mentioned difficulties they had encountered in implementing their strategies, shortcomings, or corrective actions they were undertaking to keep the strategies on track. As a result, readers are often left wondering whether or not a department has done what it said it would do and whether or not it is moving forward with its strategy.

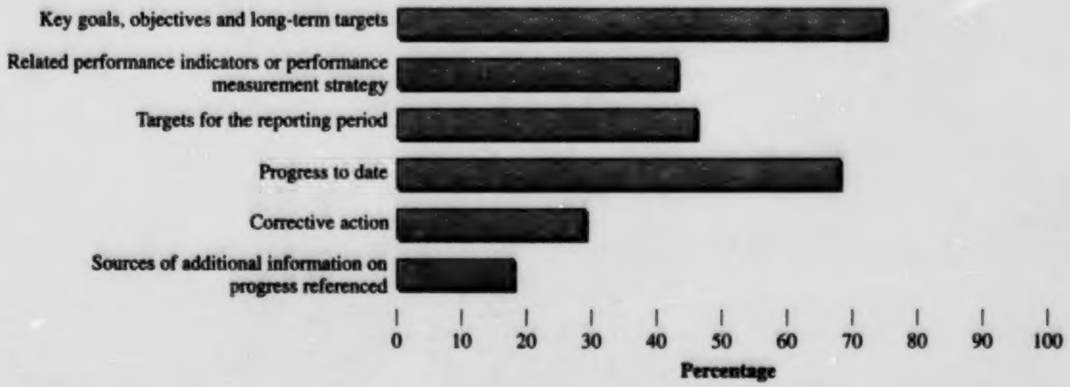
1.28 In many cases, the targets we reviewed describe ongoing or routine practices. For example, one department's strategy includes a target to "develop and implement policies and programs that consider broad horizontal policy issues and are consistent with Canada's social, economic and environmental well-being." In its progress report, the department stated about this item that a "legislative review exercise supported by new research . . . is allowing the department to look closely at the social and economic consequences of current and proposed new policy directions."

1.29 In this case, the department has stated both its expected results and its reported accomplishments in terms too vague to allow for an objective assessment of progress. The department indicates in its performance information that its legislative review is allowing it to "look closely" at the issues. However, it does not say whether it has actually met its target to "develop and implement" sustainable development policies or programs. The summary progress

Exhibit 1.3

Percentage of Departments That Provided the Information Specified in the TBS Guideline

The quality of sustainable development progress reports varied widely.



report for this department was not cross-referenced to other documents to allow access to more detailed information. Indeed, 23 of the 28 departments did not cross-reference additional information, although this is specified in the Treasury Board Guideline.

1.30 Several of the more detailed progress reports that departments provided in response to our request referred to key objectives and summarized related activities the departments had undertaken during the reporting period. The best of these reports clearly indicated each action item as either completed or in progress, thereby giving readers a better sense of the extent to which the department had implemented the actions set out in its strategy.

1.31 As was the case last year, information on the status of each activity made it easier to monitor progress on the action plans and conveyed a greater sense of assurance about the department's capacity to manage activities and track progress. Exhibit 1.4 presents the reporting format used by Natural Resources Canada. In contrast to most of the reports, it clearly indicates the extent to which the department has met its targets.

1.32 Departments, however, have continued to use terms like "encourage," "enhance," "improve," "promote," "assist," and "facilitate," without defining parameters for action, such as measurable benchmarks or expected completion dates. Departments have generally not specified the results they expect to achieve or when they expect to achieve them. They have still not been clear enough about how we will know when they have succeeded.

1.33 We recognize that it will take time for departments to establish the management practices they will need to implement their strategies. However, establishing clear performance expectations and adopting a straightforward, logical reporting framework are essential steps toward producing useful performance information for Parliament. The progress reports tabled in the House of Commons need to provide enough information for members of Parliament to judge whether action plans for sustainable development have been fully implemented and the objectives achieved.

1.34 Overall, the performance information in the 1999 progress reports continues to fall short of expectations. It thus limits the ability of parliamentarians and others to determine whether or not the strategies are on track and what corrective actions departments are taking.

Did Departments Do What They Said They Would Do?

Only half of the departments included targets in their progress reports and only about half the performance targets are clear and measurable.

1.35 The 1997 sustainable development strategies were intended to cover the three-year period ending in December 2000. In their second annual progress reports to Parliament, departments reported having accomplished on average about 20 percent of what their strategies said they would do (see Exhibit 1.5).

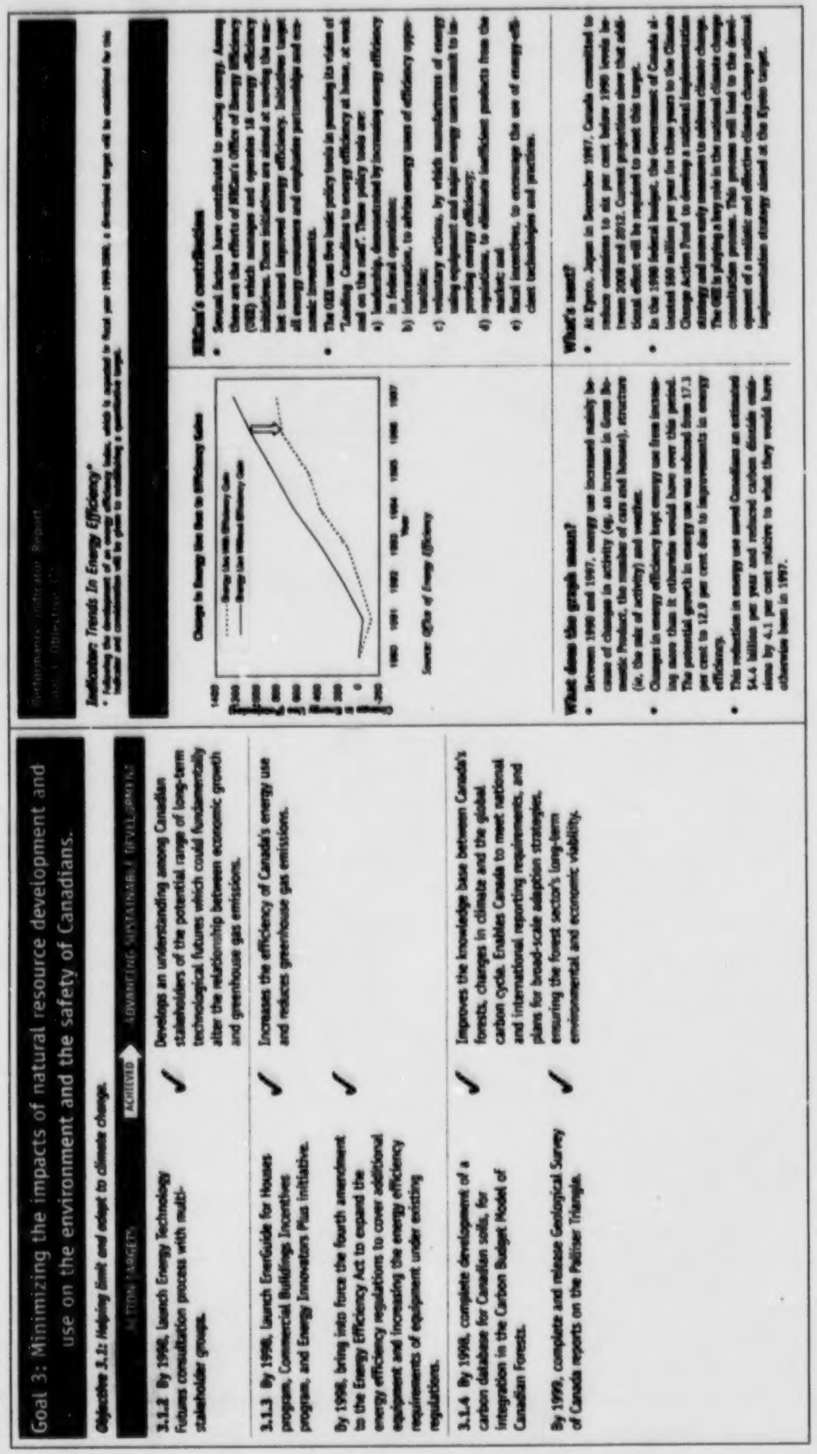
1.36 Most departments referred to some of the objectives of their sustainable development strategies (Exhibit 1.3) and reported activities they had undertaken for sustainable development during the reporting period. However, since only half of the departments included targets in their progress reports and only about half the performance targets are clear and measurable, there is little objective basis for judging progress.

1.37 Like last year, departments generally reported the activities they had undertaken. The large number of activities they reported often caused the reader to lose sight of the departments' sustainable development objectives. Departments generally did not indicate whether or not they had achieved their objectives, and in many cases the links between actions and

Exhibit 1.4

Reporting Format Used by Natural Resources Canada

The progress report of Natural Resources Canada also provides a useful summary of progress for parliamentarians. The Department's 1999 report indicates that it has accomplished 70 of the 125 targets set out in its Sustainable Development Strategy.



Goal 3: Minimizing the impacts of natural resource development and use on the environment and the safety of Canadians.

Objective 3.1: Helping limit and adapt to climate change.

ACTION TARGETS	ACHIEVED	ADVANCING SUSTAINABLE DEVELOPMENT
3.1.2 By 1998, launch Energy Technology Futures consultation process with multi-stakeholder groups.	✓	Develops an understanding among Canadian stakeholders of the potential range of long-term technological futures which could fundamentally alter the relationship between economic growth and greenhouse gas emissions.
3.1.3 By 1998, launch EnerGuide for Houses program, Commercial Buildings Incentives program, and Energy Innovators Plus Initiative.	✓	Increases the efficiency of Canada's energy use and reduces greenhouse gas emissions.
By 1998, bring into force the fourth amendment to the Energy Efficiency Act to expand the energy efficiency regulations to cover additional equipment and increasing the energy efficiency requirements of equipment under existing regulations.	✓	
3.1.4 By 1998, complete development of a carbon database for Canadian soils, for integration in the Carbon Budget Model of Canadian Forests.	✓	Improves the knowledge base between Canada's forests, changes in climate and the global carbon cycle. Enables Canada to meet national and international reporting requirements, and plans for broad-scale adaptation strategies, ensuring the forest sector's long-term environmental and economic viability.
By 1999, complete and release Geological Survey of Canada reports on the Palliser Triangle.	✓	

*Indicator: Trends In Energy Efficiency**

NRCan's contribution

What does the graph mean?

What's next?

Source: Natural Resources Canada

objectives were too abstract to allow for an assessment of progress.

1.38 Some departments continued to report on activities that were not mentioned in their strategies. Ten departments provided no information on progress toward their strategic objectives. For these departments, there was no information available to assess the extent to which they had implemented their action plans for sustainable development or achieved their objectives. This represents a significant gap. The sustainable development commitments of these departments represent more than 25 percent of the total number of action items set out by the 28 departments.

1.39 For most departments, beyond tallying the percentage of activities they reported having accomplished, we were unable to conclude from their progress reports whether the strategies are on track or whether the departments are progressing toward sustainable development. Until departments report against clear targets using a logical, concise format such as the one specified in the Treasury Board Guideline, those interested in monitoring progress will lack the information they need to do so.

Have Departments Established the Capacity to Implement Their Strategies?

1.40 To gain a better perspective on departments' capability to carry out their strategies, we looked at the management practices the six departments are using to implement their action plans. We compared those management practices with the requirements of the ISO 14001 environmental management systems standard.

1.41 The ISO 14001 standard is the product of broad stakeholder consultation and consensus on the elements of good management practice. It has received unanimous approval from the standards bodies of 67 countries, including the Standards Council of Canada. It is considered to be consistent with sustainable development and compatible

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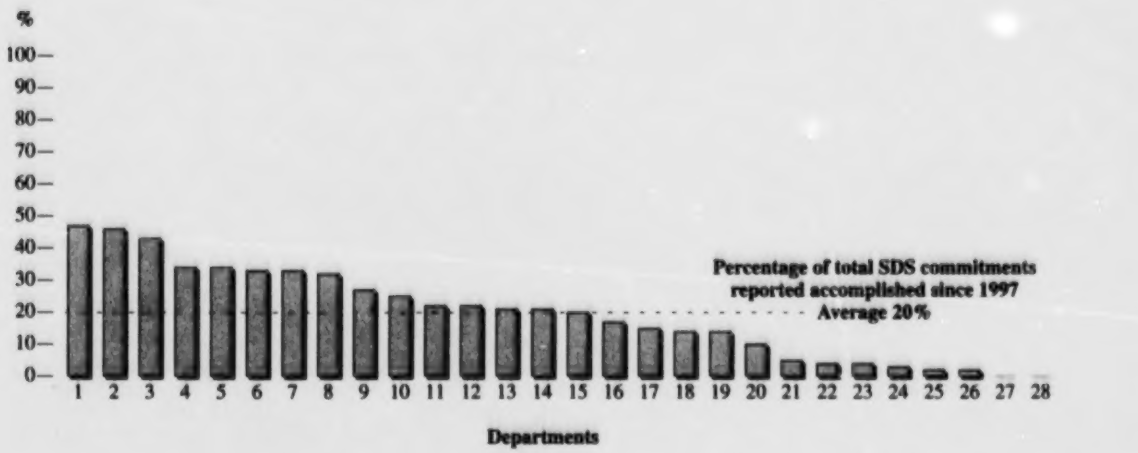
Exhibit 1.5

Implementation of Sustainable Development Strategy Action Plans



with diverse cultural, social and organizational frameworks.

1.42 All six departments we chose for this component of our monitoring work had indicated in their 1997 strategies that they were developing management systems to address their environmental issues. Two of the six indicated that their management systems would conform to ISO 14001.

Where senior management is committed to achieving results, a management system will enhance an organization's capacity to anticipate key issues and to achieve its performance objectives.

A well-functioning management system is a strong indicator that intended results will be accomplished

1.43 A good management system is a cyclical process that links an organization's objectives, action plans and results. Exhibit 1.6 illustrates this management cycle. The purpose of a management system is to provide an organization with reasonable assurance that its work is conducted in accordance with applicable regulatory requirements, professional standards and the organization's own policies and procedures.

1.44 A well-designed management system provides a structured process for achieving continual improvement. It is a strong indicator that intended results will be accomplished. As a result, ISO 14001 is becoming widely established as the standard of due diligence for managing environmental issues and sustainable development.

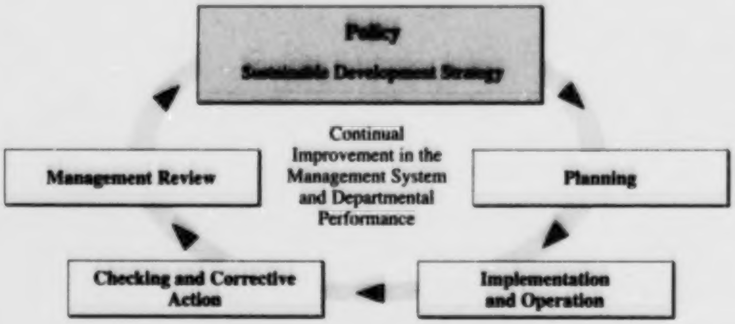
1.45 Where senior management is committed to achieving results, such a system will enhance an organization's capacity to anticipate key issues and to achieve its performance objectives. A well-functioning management system helps to "operationalize" a sustainable development strategy, provide reasonable assurance that the action plan will be implemented consistently and reliably, and improve confidence that intended results will be achieved.

1.46 Exhibit 1.7 summarizes the type of practices and procedures one sees where environmental issues and sustainable development are being managed effectively. Documenting practices and procedures is not always necessary for effective management, but it does serve a number of important purposes. It helps to ensure that the organization's policies are implemented consistently over time. It helps to reduce the risk of, for example, the loss of corporate memory that can result from staff turnover. Documented policies, practices and procedures can also prove helpful in demonstrating that an organization has exercised due diligence in addressing an issue or preventing a problem — a key test in determining legal liability.

1.47 In 1994, the government directed departments to establish environmental management systems and to emulate the best practices followed in other sectors. Departments were further directed to make their management systems and

Exhibit 1.6

A Management System Approach


Policy
Sustainable Development Strategy
Planning
Implementation and Operation
Checking and Corrective Action
Management Review
Continual Improvement in the Management System and Departmental Performance

operational practices more consistent with sustainable development.

1.48 Accordingly, in fulfilling his annual monitoring duties the Commissioner relies on recognized standards of practice for environmental management and sustainable development. This is much the same as financial auditors' reliance on accepted principles and criteria of control as part of monitoring and providing assurance in their audit work.

Our More In-Depth Look Revealed Progress but Also Gaps in Capacity

1.49 The Economic Development Agency of Canada for Quebec Regions has a highly developed management system for strategy implementation. Its general management system conforms to the ISO 9000 quality management system standard, and it has adapted that system to manage the implementation of its sustainable development strategy.

1.50 The Agency's current practices satisfy almost 90 percent of the requirements of the ISO 14001 environmental management systems standard. This supports our contention that good general management practices, like those of the ISO 9000 standard, are generic and transferable. The Appendix to this chapter summarizes how the Agency applied its existing management system to implementing its strategy.

A management system on its own does not guarantee a good result and will not make up for a lack of clear objectives or of sustained commitment by management.

Exhibit 1.7

Key Requirements of the ISO 14001 Environmental Management System

POLICIES: Communication of Policies and Performance Expectations
Policies, procedures, objectives and targets for identifying and managing the organization's environmental and sustainable development aspects with clear commitments to regulatory compliance, pollution prevention, and continual improvement
PLANNING: Assignment of Responsibilities and Resources
Clearly defined, documented and communicated roles, responsibilities and authority for those whose work may have significant environmental and sustainable development impacts; and allocation of the appropriate resources (human, technical, financial) necessary for training and implementation
IMPLEMENTATION and OPERATION: Development of Policies, Processes, Procedures and Work Instructions
• that reflect the environmental and sustainable development aspects of the organization's programs, activities, products or services and its related policies • for the communication of the system for managing the organization's environmental and sustainable development aspects to stakeholders such as employees, clients, suppliers and contractors • to ensure the competencies, training and awareness required to manage the organization's environmental and sustainable development aspects • to monitor and assess the adequacy of the system for managing the organization's environmental and sustainable development aspects • to perform timely corrective or preventive action on non-conformance with the management system, regulatory requirements and/or the organization's policy commitments for the environment and sustainable development • for the identification, maintenance and protection of documents and records related to the system for managing the organization's environmental and sustainable development aspects
CHECKING, CORRECTIVE ACTION and MANAGEMENT REVIEW
Periodic review by senior management of the adequacy of the system for managing the organization's environmental and sustainable development aspects, and ensuring that corrective actions are taken to improve its performance

Source: Office of the Auditor General

Departmental practices are most developed at the planning stage of the overall management cycle. They become weaker as the departments move from planning to implementation.

1.51 Solicitor General Canada provides policy and administrative support to several arm's-length agencies that fall within the Minister's portfolio. However, the programs and activities of those agencies, many of which have the potential to affect the environment and sustainable development, are outside the scope of the Department's sustainable development strategy. The Department relies on the agencies to address these issues themselves.

1.52 Given those limitations, we found that the Department's planning practices are thorough and it is implementing its strategy through its existing Planning, Reporting and Accountability Structure. We concluded that while it could improve the management system, particularly documentation, its practices for implementing its strategy show no significant deficiencies.

1.53 It is noteworthy that two of the Department's sub-agencies tabled their own sustainable development strategies in 1997, recognizing their significant potential impact on the environment and sustainable development. We plan to audit the management systems of those agencies next year.

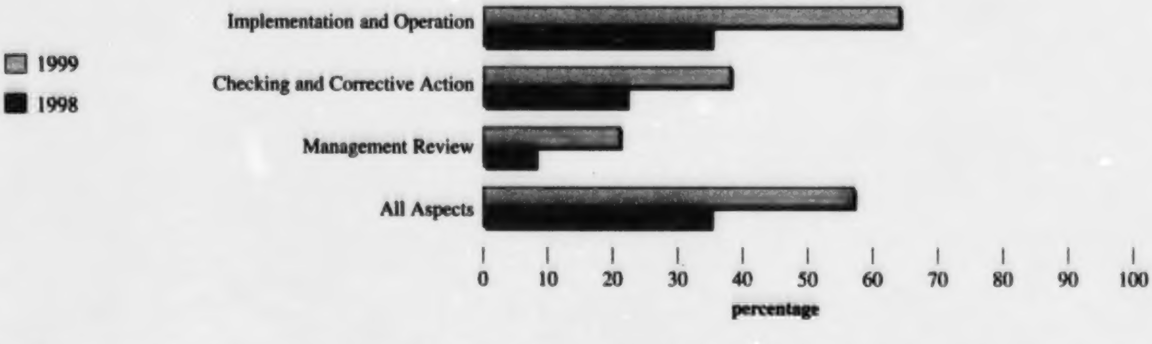
1.54 The four other departments we looked at in depth are working to establish processes and procedures to implement their strategies. Their current management and control practices are not yet developed enough to provide reasonable assurance that their action plans will be achieved. Exhibit 1.8 presents the results of our comparison of current management practices in the six departments with the major elements of ISO 14001. Results for each department we looked at this year are shown in Exhibit 1.9.

1.55 Last year we reported that departmental practices were most developed at the planning stage of the management cycle. They became weaker as the departments moved from planning to implementation, and weakest at the checking/corrective action and management review stages. In four of the six departments discussed in this chapter, our observations are consistent with those of last year (see the Commissioner's 1999 Report, Chapter 1, paragraphs 1.51 to 1.67). With the exception of the Economic Development Agency of Canada for

Exhibit 1.8

Established Management Practices Compared With the ISO 14001 Standard

Averages for the six departments we examined in 1999 and the six in 1998.



Quebec Regions and Solicitor General Canada, we found that:

- departments have yet to itemize or prioritize regulatory and other potentially applicable environmental and sustainable development obligations;
- departments have yet to establish and apply systematic practices, procedures and work instructions for strategy implementation, monitoring and control;
- departments have yet to assess their training requirements;
- most departments have yet to perform an internal audit of their management practices for environmental issues and sustainable development;
- top management has generally not reviewed the adequacy of the departments' management practices for strategy implementation;
- performance targets and performance reporting are non-existent or vague, and consequently departments (and independent stakeholders) lack the information necessary to track progress or take corrective action;
- most departments have no procedures to ensure that corrective action is taken when performance is not meeting expectations; and
- although we were told that top management has periodically reviewed progress toward strategy objectives, we found no documentation showing the results of the reviews or management recommendations for corrective action.

Closing the Gaps

1.56 Two of the departments we looked at this year are well on the way to establishing good management and control practices for strategy implementation. Several departments produced clear, concise performance information for Parliament, in accordance with the Guideline they were provided.

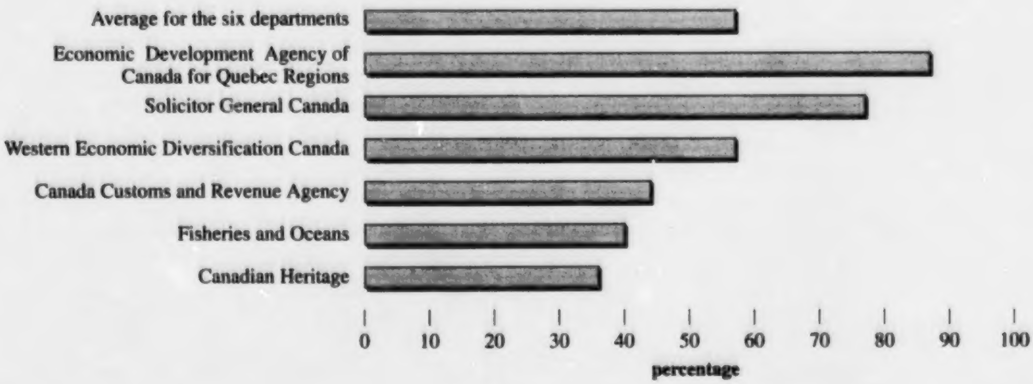
Current management and control practices are not yet developed enough to provide reasonable assurance that the action plans will be achieved.

1.57 However, most departments' management and reporting practices for their sustainable development strategies remain in the early stages of development. We observed many of the same gaps in management practices as last year. Accordingly, our recommendations from our work this year are consistent with those of last year.

1.58 In their sustainable development strategy progress reports, departments need to clearly communicate to members of Parliament and Canadians the results

Exhibit 1.9

Departmental Conformance to ISO 14001 Requirements



they have achieved in relation to key strategy goals, targets and indicators, and they need to explain variances and corrective actions required. Departments need to be specific about the extent to which they have implemented their action plans for sustainable development and achieved the objectives. They need to report on a consistent basis, allowing for some comparability from one year to the next, and they need to cross-reference the reports to more detailed information.

1.59 Departments should use the reporting format presented in the Treasury Board Guideline for the Preparation of Departmental Performance Reports to Parliament.

1.60 The individuals responsible for implementing the strategies, including those responsible for internal audit and management review, need appropriate training on the purpose and key requirements of a management system.

1.61 Departments need to perform regular assessments of their management systems to assess the extent to which they support the achievement of objectives and to identify gaps between their systems and good management practices. Senior management needs to review the findings and recommendations of those assessments and ensure that necessary corrective action is taken promptly.

1.62 Departments should establish and apply management systems to support implementation of their strategies. In doing so, they should give priority to assessing and meeting training needs, establishing the monitoring and reporting practices necessary to provide clear performance information to Parliament, and adopting the periodic self-assessment and review practices necessary to identify and close gaps between their current practices and good management practices.

1.63 We believe that it is feasible to expand the scope of general management systems to encompass strategy implementation. Departments ought to consider adapting their existing Planning, Reporting and Accountability Structures or apply similar good management practices such as those reflected in the ISO 9000 and 14001 standards.

Conclusion

1.64 This chapter provides our second annual assessment of departmental progress in implementing sustainable development strategies. Overall, departments are progressing. In 1999 they reported having met on average about 20 percent of the commitments set out in their strategies, compared with 11 percent in 1998. As Exhibit 1.5 indicated, the efforts of some departments are building momentum.

1.65 As we found last year, the quality of information that departments provided in their progress reports varied widely. Several departments followed the Treasury Board Guideline for reporting on progress and provided clear, understandable information on the status of the actions set out in their sustainable development strategies.

The performance information provided by most departments continued to fall well short of expectations.

1.66 However, the performance information provided by most departments continued to fall well short of expectations. Thus, it remains difficult to judge whether the strategies are on track or whether corrective action is required. We expect that the quality of reporting will improve as departments adopt a more systematic approach to managing strategy implementation.

1.67 In our 1998 report we recommended that departments establish clear and measurable targets that they, parliamentarians and the public could use to judge whether or not they are successfully implementing their strategies. This year we reviewed the departments' revised targets and found that about half included a clear criterion or measure of success and a clearly stated completion date. In their departmental performance reports to Parliament, about 45 percent of the 28 departments reported progress toward their targets.

1.68 We also took our second annual look at the capacity of departments to implement their strategies. Using relevant sections of the ISO 14001 environmental management system standard, we examined six departments' practices and procedures for implementing their strategies. We found that four of the six departments are still in the early stages of establishing a systematic approach to strategy implementation. There are significant gaps between their practices and the ISO 14001 benchmark. These four departments have not yet adopted a systematic approach to identifying their priorities, defining management expectations, assigning accountability for results at lower levels of the organization, identifying related training needs, or performing the self-assessments that would facilitate steady improvement.

1.69 Thus, the current management control practices for strategy implementation in four of the six departments do not provide assurance that they will implement their action plans consistently or achieve the intended results of their strategies. To remedy that deficiency, we have recommended that departments establish management control systems, giving priority to training requirements, monitoring and reporting practices and the self-assessment and review practices necessary to facilitate improvement.

About the Audit

Objective

A key duty of the Commissioner of the Environment and Sustainable Development is to monitor the progress of departments in implementing their action plans and achieving their objectives for sustainable development. The long-term goal of this work is to promote understanding, accountability and best practices in the management of environmental and sustainable development issues in federal government departments.

The objectives of our audit were to influence departmental performance in the management of environmental and sustainable development issues, through better Parliamentary understanding and oversight of departmental performance; and to promote a better understanding among departments of their obligations and best practices for meeting them.

Scope and Approach

The Commissioner's second audit of sustainable development strategy implementation consisted of two complementary components:

1. An examination of departmental performance reports (DPRs) focussed on the extent to which the 28 departments and agencies that tabled sustainable development strategies in December 1997 had reported progress on the action plans and commitments set out in their strategies.

   For all 28 departments, we reviewed the sustainable development content of the DPRs tabled in Parliament and supplementary documents that were referenced therein or that were provided to us in response to our request for information. To facilitate this component of our audit, we developed an electronic database containing all of the "commitments" made by each department in its strategy. The database allowed us to compare the accomplishments reported by the 28 departments in their progress reports with the goals, objectives, targets and actions contained in their sustainable development strategies. We did not audit departmental accomplishments to verify the accuracy of reported results; this will be the subject of future work.

   Relying on the information contained in the DPRs and supplementary progress reports provided by the departments, we assessed the extent to which the departments had done what they said they would do in their strategies. We also assessed the extent to which departments provided the performance information specified in the Treasury Board Guideline for the Preparation of Departmental Performance Reports to Parliament.

2. The capacity audit component of our work focussed on the management practices being applied to implementation of the sustainable development strategies in six departments relative to established standards of effective management and control.

   To facilitate this work, we developed an audit program based on the International Organization for Standardization (ISO) 14001 standard. ISO 14001 has received unanimous approval from the standards bodies of 67 countries, including the Standards Council of Canada, and is becoming established as the standard of due diligence for managing environmental and sustainable development issues.

We cross-referenced these criteria with the general criteria of good governance set out by the Canadian Institute of Chartered Accountants in its Criteria of Control, and with common principles of good management set out by the Treasury Board Secretariat in its guideline for departmental planning, reporting and accountability structures.

We provided our audit program, including a list of suggested documentary evidence, to the six departments approximately two months in advance of our examination. We scheduled and conducted on-site interviews and document reviews at each of the six departments to conclude whether the departments had established the capacity to consistently and reliably implement the action plans set out in their sustainable development strategies.

Audit Team

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Appendix

Economic Development Agency of Canada for Quebec Regions — Managing Implementation of the Sustainable Development Strategy

To increase its ability to evaluate and control the environmental impact of its activities, the Economic Development Agency of Canada for Quebec Regions has gradually adjusted its management practices. The Agency has made some aspects of environmental management part of its quality system, developed in accordance with the ISO 9002 standard. This involves monitoring Agency activities that could have an impact on the environment and sustainable development (ESD) and, where required, taking Agency and government ESD approaches and statutory requirements into account in the system for delivering financial and non-financial services.

Policies and strategic approaches

The Agency updates its strategic approaches on the basis of three main sources of information: diagnosis of Sustainable Development Strategy implementation by an independent firm, regular monitoring by the **Sustainable Development Committee** and a watch conducted through the Agency's participation in a variety of related federal interdepartmental tables.

Planning

The Agency has adopted an **action plan** with operational objectives, which defines roles, responsibilities and deadlines.

Responsibility for developing and implementing the action plan was assigned to the members of the SD Committee, who represent the Agency's various branches and play an active role in setting sustainable development priorities and objectives.

Implementation

The Agency has introduced mechanisms for improving its ISO 9002 quality system, in order to take ESD into account in its day-to-day operations. Control of ESD impact in projects financially supported by the Agency is ensured through compliance with the *Canadian Environmental Assessment Act*, the decision criteria for which have been added to project analysis forms. ESD concerns have also been included in the procurement procedure.

The various standards linked to the Agency's quality system are used throughout its programming and for some internal support services: application intake, ministerial correspondence, advisory services, economic leadership, applications for financial assistance, purchasing and document management.

The members of the SD Committee share duties related to implementation of the Agency's Sustainable Development Strategy (SDS), with some branches taking the leadership role for specific activities.

Management and control

Service delivery procedures are clearly described in the Agency's ISO 9002 quality system. They include steps linked to the processing of files, reference documents (acts, regulations and guidelines) and the forms to be used (quality records). All employees must follow these procedures. Internal audits conducted twice a year serve to ensure compliance with the Agency's quality system.

Habits acquired by staff with regard to use of and respect for quality system procedures have simplified the process that allows ESD issues to be taken into account.

Compliance with procedures, together with internal quality audits, helps to ensure systematic support for the management of activities.

Review

The Agency has also made a clear commitment to continuous improvement, monitored by management reviews. The SD Committee must thus account to senior management for progress made and results obtained from its activities.

Summary of the management system

The Agency's management system is summarized in the synoptic table below.

Factors in management/leadership	Products and reference documents
1. Establishing **policies** and strategic approaches • Planning and Strategic Orientations Branch • Business offices • SD Committee • Strategic Planning Committee • Operational Management Committee (approval)	• Report on Plans and Priorities • Performance Report • Program Framework • Regional Strategic Initiatives • **Sustainable Development Strategy**
2. **Planning** and developing the operational activity framework • Inter-regional Intervention and Partnership Branch • Business offices • Operational Support • SD Committee • Operational Management Committee (approval)	• Report on Plans and Priorities • Program Framework • Regional Strategic Initiatives • Business plans • Communications Plan • Evaluation and Audit Plan • **Action plan for implementation of the SDS**
3. **Implementing** and carrying out activities • Inter-regional Intervention and Partnership Branch • Business offices • Operational Support • Administrative Services • SD Committee	• Internal training, seminars and dissemination of information • Communications • Delivery of financial and non-financial services • Projects under the Program Framework • Partnership agreements with Environment Canada, National Research Council, intermediary not-for-profit organizations • **Specific ESD initiatives (greening, Enviroclub™, technology platforms)**
4. **Managing and controlling** quality and continuous improvement • Inter-regional Intervention and Partnership Branch • Operational Support • Quality, Evaluation and Information Management Branch • SD Committee	• Operational guidelines and ISO 9002 quality system procedures • Quality records (ISO 9002) service delivery procedures with clients • Document management procedures • Procurement procedures and guidelines • *Canadian Environmental Assessment Act*
5. **Review** and correction • Quality, Evaluation and Information Management Branch • Inter-regional Intervention and Partnership Branch • SD Committee • Operational Management Committee (follow-up and approval)	• Internal and external audits • Performance measurement policy • Evaluations and performance reports • **Annual evaluation of SDS implementation** • Management review • Recommendations and follow-up

Source: Economic Development Agency of Canada for Quebec Regions

Chapter 2

Greening Government Operations

When Will the Government Measure Up?

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies and practices of the Office of the Auditor General. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants. The numbered paragraphs in bold face represent recommendations.

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Greening Government Operations

When Will the Government Measure Up?

Main Points

2.1 **A decade of commitments to green government operations.** Since 1990, the federal government has made commitments to Canadians that it would green its operations. Yet, a decade later, there is a lack of rudimentary information about government's vast operations, the costs of which are likely more than $400 million annually for water, energy and waste disposal. We found that the government does not have complete and accurate data on the annual cost of running its buildings and on the environmental impacts of its operations. Given the magnitude of the dollars involved, we believe it is important that the government know its annual heating, lighting and water bills.

2.2 **Parliament ought to be concerned.** Departments embarked on the journey toward implementing an environmental performance measurement system in 1997, yet they are making uneven and slow progress. No department has fully implemented all the elements of the performance measurement framework. Parliament ought to be concerned about the current rate of implementation.

2.3 **Canadians will not get a consolidated performance report in the foreseeable future.** Given the way the government has chosen to manage its environmental agenda, Canadians will not be getting a consolidated performance report in the foreseeable future. We found very limited use of common performance indicators to measure and report on departmental progress in greening operations. There is also a lack of clear focus for developing common environmental reporting standards. Leadership is fragmented. No organization has been given the responsibility, or sees itself as the lead, for establishing a consistent, consolidated and coherent federal approach to reporting environmental performance.

Background and other observations

2.4 In the October 1999 Speech from the Throne, the government reiterated its commitment to greening operations and to making itself a model of environmental excellence. As the single largest business and employer in Canada, the federal government is in a position to lead by example. To be a model of environmental excellence, the government has to demonstrate to Parliament and Canadians that it has its own house in order. Parliament needs an overall picture of the results that have been achieved.

2.5 The government needs to take a systematic approach to greening its operations to effectively fulfil its stewardship responsibilities, contribute to sustainable development goals, ensure compliance with regulations, and meet international commitments. Full implementation of an environmental performance system will go a long way toward satisfying this need.

2.6 This audit is part of a long-term project that began three years ago. The objective of the audit this year was to provide Parliament with an assessment of the status of departmental progress in implementing environmental performance measurement for government operations. We expect that the results of this audit will assist departments in implementing environmental performance measurement for government operations and improve the information available to departmental decision makers and to Parliament.

Departments responded jointly through the Privy Council Office, indicating their support for the recommendations in the chapter. Interdepartmental discussion has begun on the appropriate accountability framework and action plan necessary to contribute to more uniform reporting of progress. Public Works and Government Services Canada, in its response, expressed its commitment to working with other departments to improve measures for greening tenant department operations in both Crown-owned and Crown-leased facilities.

Introduction

A decade of commitments to green government's operations

2.7 A commitment to environmental excellence. In the October 1999 Speech from the Throne, quality of the environment, encompassing many environmental and sustainable development issues, was identified as a major priority of the government in the coming years. In the Speech, the government reiterated its commitment to greening its operations, making itself a model of environmental excellence by doing more to clean up contaminated federal sites, strengthening its capacity for conducting environmental research, exploring new environmental clean-up technologies and reporting regularly on the results achieved. The Speech reaffirmed commitments to greening operations first articulated almost a decade ago.

2.8 The concept of environmental stewardship. The government's efforts to green its operations can be traced at least as far back as the Federal Environmental Stewardship Initiative announced in Canada's Green Plan in 1990. The government reaffirmed its commitment to implementing the stewardship initiative through the Code of Environmental Stewardship released in 1992.

2.9 The Code of Environmental Stewardship set out the due care and diligence that the government expected of departments in managing resources judiciously to prevent waste and minimize environmental damage. The Code outlined the areas to be addressed through the development and use of individual departmental action plans. Reporting on these action plans was to be the means by which the federal government would demonstrate that it was putting its own house in order.

2.10 The stewardship initiative was carried a step further in 1995 with the publication of *A Guide to Green Government* and *Directions on Greening Government Operations*. The government established guidelines and best practices to integrate environmental considerations into their operations. The guidelines included a commitment to meet or exceed federal environmental statutes and regulations, and to implement environmental management systems. Responsibility for implementing the Guide was delegated to individual ministers.

2.11 With the amendments to the *Auditor General Act* in the same year, the greening of government operations became a key element of departmental sustainable development strategies. Twenty-four departments were required to prepare individual strategies and report on their progress in implementing these strategies. The first round of strategies was tabled in Parliament by December 1997. The second round is due to be tabled in Parliament by December 2000.

The 1999 Speech from the Throne reaffirmed commitments to greening operations first articulated almost a decade ago.

2.12 Departments made commitments to greening their operations in their initial sustainable development strategies. The strategies were to be results-oriented and identify, in sustainable development terms, the targets the departments expected to achieve. The strategies would set out how the departments would measure, manage and reduce the environmental impacts of day-to-day operations. Since 1995, departments have known that performance measurement is an integral part of the sustainable development strategies. In *A Guide to Green Government*, the government directed departments to report annually on progress toward sustainable development in their departmental performance reports. Government-wide reporting on sustainable development was not addressed.

Government is in a position to lead by example

The greening of government operations can have a considerable impact on Canada's sustainable development prospects.

2.13 The greening of government operations can have a considerable impact on Canada's sustainable development prospects. As the single largest business and employer in Canada, the federal government is in a position to lead by example by integrating environmental considerations into all its decisions and day-to-day activities. Measuring performance is a critical step toward minimizing the environmental impact of operations and maximizing the financial benefits. As part of their stewardship responsibilities, departments need to track information on the effects of their operations so that they can make decisions in accordance with their sustainable development commitments.

Parliament needs an overall picture of the results achieved

The federal government needs to demonstrate that it has its own house in order.

2.14 To be "a model of environmental excellence", the federal government needs to demonstrate that it has its own house in order. As well, by measuring and reporting on the progress of greening government operations, the federal government will enhance its credibility as it works with the private sector, other governments and citizens to meet Canada's international commitments in critical areas such as climate change.

2.15 To exercise its essential oversight of government activities, Parliament needs useful reports to hold the government to account on its environmental commitments. These include commitments to green its extensive physical operations and to lead by example in its domestic and international efforts. Objective, fact-based performance reporting would help provide direction on the appropriate use of resources. It would also help to ensure that greening of government operations is focussed, on schedule, and moving toward the overall goal of sustainable development.

This audit is part of a long-term project

2.16 The Commissioner of the Environment and Sustainable Development is committed to helping improve the information available to departmental decision makers and to Parliament. The government's ability to demonstrate progress in getting its own house in order is an integral part of the larger, more complex task of integrating sustainable development into decision making for government policies and programs.

2.17 Three years ago we began the project Accounting for Sustainable Development (see the Glossary — Appendix A). The main emphasis of the project was on helping departments develop tools for advancing sustainable development. We conducted studies in two areas: building environmental considerations into policy and program decisions; and measuring the environmental performance of departments' internal operations. The studies relevant to the work reported in this chapter were reported in previous annual Reports of the Commissioner of the Environment and Sustainable Development (Chapter 7, Counting the Environment In — 1998 and Chapter 8, Greening Government Operations: Measuring Progress — 1999).

2.18 Our previous work focussed on helping departments build the tools for measuring the environmental impacts of their operations. Case studies were conducted of two key federal departments, as well as other public sector organizations from other jurisdictions. We summarized their progress in assembling environmental performance information and identified several lessons learned. In addition, we worked with the interdepartmental Committee on Performance Measurement for Sustainable Government Operations. The Committee developed common performance measures for operations. Our previous work demonstrated that measuring environmental performance is practical and feasible for government departments. However, we were concerned about the capacity of individual departments, and the government as a whole, to effectively manage and report on the environmental impacts of their operations.

Focus of the audit

2.19 This year we shifted the focus of our Accounting for Sustainable Development project from capacity building to audit. We concentrated exclusively on the environmental performance of departments' internal operations. Our audit objective was to provide Parliament with an assessment of the status of departmental progress in implementing environmental performance measurement for government operations. We also looked at the use of common performance indicators.

2.20 To obtain the necessary audit evidence, we asked departments to complete a questionnaire that was designed to assess progress. We did a detailed assessment of key departments and a general assessment of the departments with less significant operational environmental impacts. Appendix B lists the 30 departments and agencies that we surveyed. For simplicity, we refer to all organizations as departments in this chapter. Departmental progress was assessed based on a common framework of steps first introduced in Chapter 8 of the Commissioner's 1999 Report.

2.21 We expect that the results of this audit will assist departments in implementing environmental performance measurement for government operations and improving the information available to departmental decision makers and to Parliament. The audit will also provide important baseline information for future audit work. Further details on the audit can be found at the end of the chapter in **About the Audit**.

Observations and Recommendations

Lack of Annual Operational Data

The government does not know the environmental impacts and costs of its operations

2.22 In 1995 the federal government estimated that it had some 224,000 employees, 21.4 million hectares of land under direct management, 59,000 buildings and facilities, more than $8 billion in purchases of goods and services, and 25,000 motor vehicles. With these vast and dispersed resources and facilities, it is crucial that the federal government have comprehensive, fact-based information on its operations.

Departments do not have complete and accurate data on the annual cost of running their buildings.

Rough estimates of water, energy and waste disposal costs are at least $400 million annually

2.23 **We had a hard time piecing together a complete picture.** The 30 departments we assessed do not have complete and accurate data on the annual cost of running their buildings. This lack of information has serious accountability and stewardship implications. How can the government get its own house in order if it does not know its utility bills for water, energy and solid waste disposal, either by department or in total?

The government does not know its utility bills for water, energy and solid waste disposal, either by department or in total.

2.24 We asked departments that own facilities to provide annual operational data on the amounts spent on water and energy use in facilities, solid waste disposal, and fuel for vehicle fleet, as well as the amount of tonnes of solid waste disposed. Public Works and Government Services Canada provided us with operational data for buildings and facilities it owns and leases to tenant departments. Twenty departments provided the amount spent on energy use in facilities that they own but fewer than half of the departments were able to provide data on the other environmental aspects. From this incomplete data, we derived an average dollar amount per square metre and extrapolated over the total area of building space occupied by the 30 departments.

2.25 We estimate that the 30 departments annually spend $68 million on water, $312 million on energy, and $17 million on solid waste disposal, and that they generate 114,000 tonnes of solid waste. These estimates are rough, but they serve to illustrate the potential environmental and financial impacts of government operations.

Data on space used are not available from a single source

2.26 To get an overview of the building space and facilities used by the 30 departments, we asked departments to specify the area of the buildings and facilities they owned or leased. If departments leased space, we attempted to determine from whom — either the private sector or Public Works and Government Services Canada. Many departments were unable to provide the data on total area they occupied and, in some cases, were unaware of the area leased and the actual owner. We obtained data from Public Works and Government Services Canada and from the Real Property Management Division at the Treasury Board Secretariat. We then merged both sets of data and compared the result with the information supplied by the departments. We estimate that the 30 departments occupy 23 million square metres of building and facility space. Exhibit 2.1 shows our estimates of the area occupied by the departments in owned and leased buildings and facilities.

Many departments were unable to provide the data on total area they occupied and, in some cases, were unaware of the area leased and the actual owner.

The lack of operational data has serious implications

2.27 We are concerned about departments' apparent lack of ability to generate complete and accurate operational data. The stakes are high in terms of identifying opportunities for savings. The gaps in accuracy and completeness of the operational data limit our ability to estimate potential savings for the 30 departments. However, based on work reported in Chapter 8 of the Commissioner's 1999 Report, potential savings on energy costs alone are likely to be between $60 million and $120 million annually for the government as a whole. In addition, there are serious implications for the government's ability to derive consolidated annual operational data. If the government wants to be a model of environmental excellence and lead by example, both at a departmental level and government-wide, data on basic operations are required. Baseline data are necessary to set realistic targets, to allow departments to determine if they have met them and to achieve positive environmental impacts. Furthermore, basic operational data are needed to demonstrate that legislative requirements and international commitments are being met.

2.28 **The need to lead by example in reducing greenhouse gas emissions.** In December 1997, the government committed to the Kyoto Protocol. The agreement called for a reduction of greenhouse gas emissions to 6 percent below 1990 levels between 2008 and 2012. The government has stated that it needs to demonstrate leadership by ensuring that its own efforts to reduce greenhouse gas emissions are at least as vigorous as those of the rest of Canada.

2.29 A working group from Natural Resources Canada, Environment Canada and other departments was given the task of planning and implementing the government's response to this commitment. In order to set annual reduction targets for greenhouse gas emissions, data on 1990 baseline levels and current-year levels of greenhouse gas emissions are needed. However, the

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working group found that the baseline data do not exist for the government as a whole. Moreover, not all departments have the capacity to provide current-year energy data on all their buildings and facilities. Collecting such data will require considerable time and expense. The working group is considering obtaining energy data directly from the suppliers.

2.30 In the past, Natural Resources Canada used rough estimates to set and monitor annual reduction targets for greenhouse gas emissions. Environment Canada collects data on greenhouse gas emissions for the rest of the country but does not do so for the federal government. This may impede the government's credibility and its ability to work with the private sector, other governments and citizens in its efforts to meet its commitments.

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2.31 Good management requires good measurement. The fact that we had to prepare our own estimate of annual operational data, and the considerable uncertainty in the estimates, highlight the need for complete and accurate baseline information. The government needs to take a systematic approach to greening its operations. Full implementation of an

Exhibit 2.1

Estimates of Area Occupied by Departments

To derive estimates of the area owned and leased by the 30 departments, we compiled data from various sources — the departments themselves, Public Works and Government Services Canada (PWGSC) and the Real Property Management Division at the Treasury Board Secretariat. We merged the Treasury Board Secretariat and PWGSC data and compared them with the information supplied by the departments.

Department	Total area occupied by department (000s m^2)	Area owned and occupied by department (000s m^2)	Area leased from private sector and occupied by department (000s m^2)	Area under PWGSC and occupied by department	
				Owned and under PWGSC custody (000s m^2)	Leased and under PWGSC custody (000s m^2)
Agriculture and Agri-Food Canada	769	650	35	44	40
Correctional Service Canada	1,227	1,174		13	40
Fisheries and Oceans	472	331	1	29	112
National Defence	12,879	11,800	700	251	127
Health Canada	532	374	2	125	31
Natural Resources Canada	316	217	30	53	17
Parks Canada	512	458	1	34	19
Public Works and Government Services Canada	291	237	55	–	–
Royal Canadian Mounted Police	1,020	735	204	26	56
Transport Canada	2,130	1,929	99	26	76
Subtotal	**20,148**	**17,904**	**1,126**	**601**	**518**
Other 20 departments	3,290	636	472	1,175	1,006
Total	**23,439**	**18,540**	**1,598**	**1,776**	**1,525**

Note: Figures have been rounded.

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Note: Figures have been rounded.

environmental performance measurement system will go a long way toward satisfying this need.

Ten departments have the greatest environmental impacts and occupy 86 percent of the estimated total space occupied by the 30 departments.

The Government Is Not Measuring Up

2.32 Good and consistent performance information enables departments to set targets that are achievable, to monitor progress, to promote due diligence, to ensure compliance, and to manage costs.

Key players in greening operations

2.33 **Ten key departments.** Our assessment of departmental progress in implementing performance measurement for greening operations included all 30 departments; however, we focussed more on the key players — those departments whose operations have the greatest environmental impacts. We identified 10 departments as key players in greening operations. These departments individually occupy more space than most of the other departments and together occupy 86 percent of the estimated total space occupied by the 30 departments.

2.34 The key players in greening operations are also major custodial departments. They have direct control over most of their operations because they own a substantial portion of their buildings and facilities. The key players include Agriculture and Agri-Food Canada, Correctional Service Canada, Fisheries and Oceans, Health Canada, National Defence, Natural Resources Canada, Parks Canada, Public Works and Government Services Canada, Royal Canadian Mounted Police and Transport Canada.

2.35 While Human Resources Development Canada and the Canada Customs and Revenue Agency occupy significant amounts of space, we did not include them in our detailed assessment because they lease almost all of their buildings and facilities.

2.36 **The 20 other departments.** The 20 other departments we assessed lease most or all of their buildings and facilities. As tenants, many consider that they have limited control over the operations of their facilities. As the central custodian for federal government office accommodation, Public Works and Government Services Canada acknowledges that it is responsible for environmental performance for greening of operations in its Crown-owned buildings that are used by departments. However, the Department has no direct control over operations in the buildings and facilities it leases for departments, and therefore it does not collect and report environmental performance information.

We believe it is reasonable to expect many departments to have made significant progress and to have resolved many of the challenges and constraints by now.

We expected many departments to have made significant progress

2.37 In 1995, *A Guide to Green Government* explicitly articulated the need for some sort of environmental performance measurement regime. Our previous work involving environmental performance measurement had shown us that it can take up to five years to fully implement performance measurement for greening of operations. Departments embarked on this journey in 1997 with the tabling of their sustainable development strategies, in which most departments committed to greening operations and measuring and monitoring their progress.

2.38 While we acknowledge that some departments still lack capacity and may only now be taking the first steps on this journey, we believe it is reasonable to expect many departments to have made significant progress and to have resolved many of the challenges and constraints by now.

2.39 Our assessment was based on a performance measurement framework that includes defining scope and direction, designing a measurement system, collecting baseline information, setting targets, reporting, and reviewing and improving performance. This framework is consistent with the International Organization for Standardization (ISO) 14031 standard (see Glossary — Appendix A) and was introduced in Chapter 8 of the Commissioner's 1999 Report. Exhibit 2.2 provides a description of each element of the performance measurement framework.

2.40 The interdepartmental Committee on Performance Measurement for Sustainable Government Operations developed a list of proposed environmental performance indicators for federal departments and these were reported in Chapter 7 of the Commissioner's 1998 Report to Parliament. The proposed indicators were organized according to 11 environmental issues or aspects. These aspects are contaminated sites, hazardous materials/wastes, water use, solid waste management, vehicle fleet, ozone-depleting substances, green procurement, energy use in federal facilities, petroleum storage tanks, releases/spills, and wastewater sewage. Departments may also have additional environmental aspects applicable to their operations and thus may develop other indicators.

2.41 The capacity to measure is critical. All of the elements of the performance framework are considered necessary to effectively manage greening of operations and measure results in a systematic manner. However, the capacity to measure performance is critical to minimize the environmental impact of operations and maximize financial benefits. The key departments we examined occupy 86 percent of the total estimated space occupied by the 30 departments. Therefore, key departments have potentially the most environmental impact, and the risks associated with gaps in the framework are of more concern.

No department has fully implemented all the elements of the performance measurement framework.

Progress is slow and uneven

2.42 Government departments are making slow and uneven progress in implementing performance measurement for greening their operations. No department has fully implemented all the elements of the performance measurement framework. Departments noted that they face significant constraints.

Exhibit 2.2

Elements of a Performance Measurement Framework

Defining the scope and direction	Designing a measurement system	Collecting baseline data	Setting targets	Reporting	Reviewing and improving performance
Develop a plan that includes: • Priorities • Actions • Applicable environmental aspects • Timetable • Resources • Evidence of senior management commitment	Select relevant, realistic and quantifiable performance indicators. Define roles, responsibilities and accountabilities.	Define baseline point. Collect baseline data at a national level for all applicable aspects using selected performance indicators.	Set clear, measurable and time-bound targets for all applicable aspects. Link targets to performance indicators.	Report on performance results of all applicable aspects. Report internally and externally. Link performance reporting to departmental commitments and targets.	Establish a system for reviewing and improving performance. Review and monitor performance regularly and on a national basis. Evaluate environmental impacts and identify opportunities for improvement and cost savings.

Without collecting essential data, departments cannot effectively manage the greening of their operations, let alone achieve and demonstrate results.

2.43 **Key departments.** We examined the key departments to assess the degree to which they had implemented each element of the performance measurement framework (see Exhibit 2.3). The following section summarizes our view of current departmental progress.

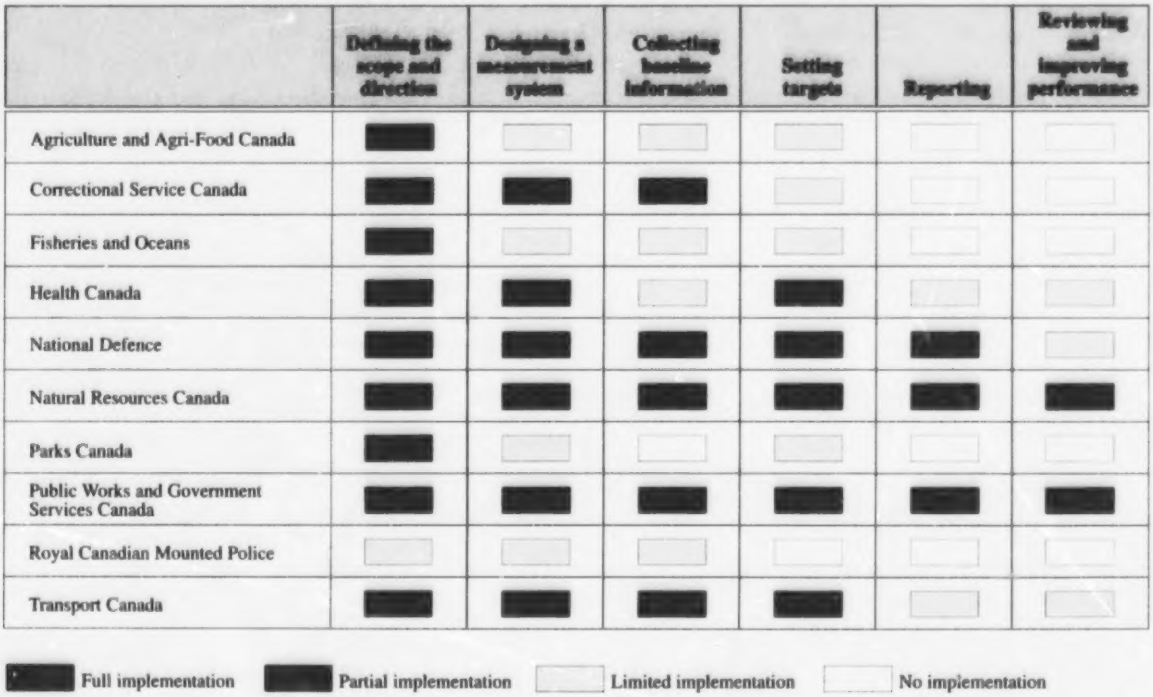
None of the key departments has fully implemented all the elements

2.44 **Significant gaps exist.** As illustrated in Exhibit 2.3, many gaps exist in implementing the various elements. One of the significant gaps is in collecting baseline data. This has an impact on the capacity of departments to measure, report, review, monitor and achieve targets for all of the applicable aspects. We are concerned that without collecting essential data, departments cannot effectively manage the greening of their operations, let alone achieve and demonstrate results. As well, until departments collect department-wide baseline data, set clear and time-bound targets, and develop realistic and measurable indicators, for all applicable environmental aspects, departmental performance reports will be incomplete. As a consequence of these gaps, aggregate government-wide performance reporting for greening of operations is currently impossible.

2.45 **Four key departments have made some progress.** The four key departments that have made progress in implementing performance measurement for greening of operations are Health Canada, National Defence, Natural Resources Canada and Public Works and Government Services Canada. These departments have started work on implementing all the elements of a performance measurement system. But there are gaps in the quality and

Exhibit 2.3

Progress by Key Departments, Highlighting the Gaps in Implementing Performance Measurement



	Defining the scope and direction	Designing a measurement system	Collecting baseline information	Setting targets	Reporting	Reviewing and improving performance
Agriculture and Agri-Food Canada	■	▒	▒	▒	□	□
Correctional Service Canada	■	■	■	▒	□	□
Fisheries and Oceans	■	▒	▒	▒	□	□
Health Canada	■	■	▒	■	▒	▒
National Defence	■	■	■	■	■	▒
Natural Resources Canada	■	■	■	■	■	■
Parks Canada	■	▒	□	▒	□	□
Public Works and Government Services Canada	■	■	■	■	■	■
Royal Canadian Mounted Police	▒	▒	▒	□	□	□
Transport Canada	■	■	■	■	▒	▒

■ Full implementation ■ Partial implementation ▒ Limited implementation □ No implementation completeness of implementation for some of the applicable environmental aspects.

2.46 All of the four departments have developed action plans to implement performance measurement. These plans include timetables for completion and defined environmental roles, responsibilities and accountabilities. The action plans were communicated internally, although the extent of communication and support by senior management was not assessed. Health Canada and Public Works and Government Services Canada developed indicators for all environmental aspects. National Defence and Natural Resources Canada do not have a performance indicator for measuring procurement of environmentally friendly products and services. This is significant because the government spends more than $8 billion annually in goods and services.

2.47 Three of the four departments have collected baseline data for a majority of their applicable environmental aspects at a national level and have collected such data for several years. We found that Public Works and Government Services Canada uses estimates to measure performance and to report on energy use in federal buildings. We would expect that this department, as the central custodian, would use actual data on energy consumption and costs.

2.48 Not all of the targets set by the four departments are clear, realistic, measurable and time-bound. For example, for the hazardous material/wastes aspect, the departments set general targets such as "reduce environmental risks", "continue to comply with regulations", or "demonstrate a downward trend in quantities of hazardous waste sent for disposal". Targets need to be more specific. We also found that not all targets are directly linked to the performance indicator used. For the fleet management aspect, one department measures fuel consumption, but its target is only to maintain vehicles in accordance with the manufacturer's specifications. In addition to this, we would expect a target to be along the lines of "X percent reduction in fuel consumption by XX 200X".

2.49 There are gaps in reporting performance to Parliament for all applicable environmental aspects. There are also weaknesses in linking performance results to targets and commitments. Of the four departments that have made some progress, National Defence has made the most progress, both in completeness and quality in its Departmental Performance Report. The Department reports results against targets set out in its Sustainable Development Strategy in a manner that clearly demonstrates the environmental impacts of its operations.

Aggregate government-wide performance reporting for greening of operations is currently impossible.

2.50 "Reviewing and improving performance" is the least developed element of the performance measurement framework for all the departments we assessed. This element is fundamental to improving overall environmental performance.

2.51 Three departments are making slow progress. Agriculture and Agri-Food Canada, Correctional Service Canada and Transport Canada are making slow progress toward measuring performance. Gaps exist in most elements. Agriculture and Agri-Food Canada and Transport Canada have only partially defined their environmental roles, responsibilities and accountabilities. Transport Canada stated that performance measurement for greening of operations was not considered when the Department's environmental management system was initially developed. Transport Canada has begun working on a formal plan for measuring performance in its operations. Agriculture and Agri-Food Canada has collected site-specific data; however, data are not centralized and there are no department-wide measures for seven of the eleven applicable environmental aspects.

2.52 None of these three departments have reported performance results in their 1999 departmental performance reports. They are all at only an early stage of monitoring performance. Correctional Service Canada recognizes that it is "not yet at a point where it can monitor performance on a continuous basis, but it is at the threshold of implementing several of the required instruments."

Departments will not reap the full benefits of their investment in greening activities until they collect baseline data, establish targets, monitor the progress and improve on results.

2.53 Given the early stage of development of many of the performance measurement framework elements, these departments could look to the four leaders for guidance and lessons learned in setting targets and reporting results.

2.54 **Three departments are making limited progress.** Fisheries and Oceans, Parks Canada, and the Royal Canadian Mounted Police have made limited progress toward measuring their performance. Large, obvious gaps exist in implementing most elements and no progress has been made at all for some elements.

2.55 Fisheries and Oceans has identified few performance indicators. Parks Canada has not identified its environmental roles, responsibilities and accountabilities and has no centralized data for its environmental aspects. The three organizations are lagging in collecting baseline data. The Royal Canadian Mounted Police has set targets for only one environmental aspect; while Parks Canada has set targets for all environmental aspects, the majority of targets are not measurable or time-bound.

2.56 None of the three reported performance results either internally or in their 1999 departmental performance reports. As they have not yet collected the necessary information, they cannot review and monitor performance.

2.57 In summary, as noted in our 1998 and 1999 reports, there are significant opportunities for energy cost savings of between $60 million and $120 million, as well as for reduced environmental impacts. But departments will not reap the full benefits of their investment in greening activities until they collect baseline data, establish targets and programs to meet the targets, monitor their progress and improve on results. Many environmental improvements, including better energy and water efficiency, waste minimization and pollution prevention, could be achieved and could translate into a reduction of costs. These benefits could extend to both owners and tenants.

Profile of the other departments

2.58 The 20 remaining departments we assessed occupy 3.3 million square metres of space, representing only 14 percent of the total space occupied by the 30 departments (see Exhibit 2.4). These departments are mostly tenants — that is, they lease 81 percent of their office space from either Public Works and Government Services Canada or from a private sector landlord. Seven of the 20 both own and lease buildings and facilities, while 13 lease exclusively.

2.59 **What we expected.** We expected these 20 departments to be in the process of implementing a performance measurement framework. And we expected this framework to include all environmental aspects applicable to their operations. Their operations are generally smaller and have fewer applicable environmental aspects than those of the 10 key departments. Nevertheless, all of the performance framework elements are considered necessary to effectively manage greening of operations and to measure results systematically. However, the degree of effort and sophistication may be less for these 20 departments than for the key departments, due to the smaller scale of their operations.

2.60 Public Works and Government Services Canada plays a critical role. As custodian, Public Works and Government Services Canada is responsible for greening the 1.1 million square metres of Crown-owned buildings occupied by the 20 departments. In its Sustainable Development Strategy and its Report on Plans and Priorities, the Department has set targets for greening operations in Crown-owned facilities for many environmental aspects. In its environmental performance measurement framework, it has included the Crown-owned buildings occupied by other departments. As we noted previously, the Department has made some progress toward implementing an environmental performance measurement framework for Crown-owned buildings and facilities. However, it does not collect and report information for environmental aspects of the buildings and facilities it leases for departments.

2.61 Constraints posed by leased space. We recognize that for leased buildings and facilities, the pursuit of many greening initiatives and the capacity to measure performance lie with the owners of the buildings and facilities. In some cases, departments may not be able to pursue certain greening initiatives such as structural changes and solid and hazardous waste diversion programs. However, we expected that departments leasing facilities would pursue greening initiatives and measure results in areas where they can influence results. For example, to improve water and energy use and to reduce solid waste in leased facilities, departments can address such things as employee behaviour, procurement of energy-saving office equipment and recycling activities. Further, where a department is the major tenant, it may have some leverage to apply in furthering its commitments to greening operations.

There is a wide range of progress among the 20 other departments in implementing environmental performance measurement for greening of operations.

Departmental progress covers a wide range

2.62 There is a wide range of progress among the 20 departments in implementing environmental performance measurement for greening of operations. None of the 20 departments has fully implemented a performance measurement framework for greening all applicable environmental aspects of its operations. Six departments have made some progress in implementing such a framework. These six departments have defined the scope and direction, identified applicable environmental aspects, and defined environmental roles, responsibilities and accountabilities. Gaps exist in the completeness of baseline data and the quality of targets and reported results. In

Exhibit 2.4

Breakdown of Space Occupied by the 20 Other Departments

			Area under PWGSC and occupied by the 20 departments	
Total area occupied by the 20 departments (000s m^2)	**Area owned and occupied by the 20 departments (000s m^2)**	**Area leased from private sector and occupied by the 20 departments (000s m^2)**	**Owned by PWGSC and under PWGSC custody (000s m^2)**	**Leased and under PWGSC custody (000s m^2)**
3,290	636	472	1,175	1,006
100%	19%	14%	36%	31%

Note: Figures have been rounded.

some cases, the mechanisms for monitoring and review are in place but the process has not been implemented.

2.63 The remaining 14 of the 20 departments are either making limited progress in measuring their performance or are still at the beginning stages. Significant gaps exist in their performance measurement frameworks. Some of these departments have no plan for performance measurement; have not defined their roles, responsibilities and accountabilities; have set very few targets and collected little baseline data; and do not report performance.

Departments need to differentiate between owned and leased buildings in defining how they will meet their greening commitments.

2.64 We found no evidence of environmental performance information for buildings and facilities that are not Crown-owned — over 1.5 million square metres (45 percent) of space occupied by the 20 departments (total 3.3 million square metres). This was also the case for 1.6 million square metres (8 percent) of space occupied by the 10 key departments (total 20.1 million square metres).

2.65 A few departments are pursuing greening initiatives in leased buildings and facilities for solid waste management and energy consumption. The initiatives are largely directed at changing employee behaviour. For example, Solicitor General Canada collected performance data for two years on the percentage of waste recycled, and set a target to recycle 75 percent of waste by 1 March 2000. To improve energy efficiency, the Department has set a target to make 50 percent of all office equipment purchases energy-efficient by 1 March 2002.

Commitments to greening operations need to be clearly articulated

2.66 Departments committed to greening their operations in their sustainable development strategies and reports on plans and priorities. We found that departments did not clearly differentiate between owned and leased buildings in defining how they will meet their greening commitments. Nor did they articulate their roles as tenants and their expectations of the owners.

2.67 **In the next set of sustainable development strategies, due by December 2000, all departments should clearly articulate the scope of their commitment to greening operations and identify who will measure, report, monitor and achieve results for each environmental aspect applicable to their operations.**

Departments face significant constraints

2.68 We asked departments to tell us about the constraints encountered in developing and implementing a performance measurement framework for greening operations. Some common constraints noted were competing priorities, lack of central leadership and guidance, lack of expertise, resource constraints, data availability, and lack of control over operations.

2.69 Departments said that the lack of central leadership and guidance from lead organizations has meant that they are developing their environmental management systems from the ground up.

2.70 Most departments cited a lack of resources as a major constraint. Significant time and resource requirements are involved in establishing new systems and procedures, and these have an impact on the pace at which the environmental aspects and initiatives can be measured and monitored efficiently. There can be a time lag between incurring the costs of introducing environmental performance measurement and receiving the payback in resulting benefits.

Decision Makers Need Government-Wide Reporting

2.71 Reporting is an important part of accountability and is the vehicle for presenting the results that have been achieved. An objective and balanced performance report is needed to enable decision makers to ensure that greening of government operations is focussed, on schedule, and moving toward the goal of sustainable development. An aggregate report is needed for parliamentarians to use as a yardstick for measuring government-wide progress. Such a report is also useful to the public as an accountability document. In consultations, the Treasury Board Secretariat found that parliamentarians want collective reporting on horizontal issues such as sustainable development.

An aggregate report is needed for parliamentarians to use as a yardstick for measuring government-wide progress.

There is limited use of common performance indicators

2.72 We expected departments to use common environmental performance indicators to measure and report on their progress in greening similar operational activities. This would facilitate government-wide reporting.

2.73 Our review of departmental sustainable development commitments and the 1999 departmental performance reports confirmed that few departments reported results in a format that links directly to their commitments. Further, we found that the use of similar performance indicators is minimal; therefore, it is not possible to aggregate results or to provide parliamentarians with an overview of government-wide performance and progress on commitments.

2.74 The interdepartmental Committee on Performance Measurement for Sustainable Government Operations offers a menu of performance indicators for departments to choose from in managing their applicable environmental aspects. However, departments may also use other performance indicators that apply to their environmental aspects. We found that more than half of the departments planned to use at least one of the Committee's proposed indicators for some common environmental aspects. The indicators they planned to use are:

- number of contaminated sites remediated;
- cubic metres per year of water used (per building/occupant/m^2 of office space);
- total number of kilometres by vehicle fleet;
- number of alternative-fuel vehicles;
- gigajoules of energy use per year (per building/occupant/m^2 of office space); and
- percentage and number of storage tanks in compliance with regulations.

2.75 Contrary to the departments' plans, our review of the departmental performance reports revealed that departments, on the whole, do not use the Committee's proposed indicators in reporting; nor do they use any other common performance indicators. Unless all departments use the same performance indicators, where certain environmental aspects are applicable, government-wide measures will never be developed.

Departments do not use common performance indicators for reporting.

2.76 Few departments have progressed to the point where they can actually report on performance using results-oriented and quantifiable indicators. Some of the more quantifiable indicators proposed by the Committee, such as gigajoules of energy use, may be useful for consolidating into a more meaningful set of core indicators. The core indicators can be used for aggregating performance information into a government-wide performance report on greening operations. However, many weaknesses remain in collecting essential data and in setting targets. Even if departments develop more robust environmental performance measurement systems, further efforts will still be needed to achieve consistency in reporting and aggregate reporting.

Reporting on compliance with federal regulations

No organization has been given the responsibility, or sees itself as the lead, for establishing a consistent, consolidated and coherent federal approach to reporting environmental performance.

2.77 We looked at environmental aspects subject to various federal regulations — contaminated sites, hazardous materials, fleet management, ozone-depleting substances, petroleum storage tanks, and releases/spills. We found that, where applicable, less than a third of the departments reported on compliance with federal regulations in their departmental performance reports. It is important that Parliament receive timely and accurate information that demonstrates that federal acts and regulations are being observed. A good example of such reporting is the *Report on the Application of the Alternative Fuels Act* that is tabled annually by the President of the Treasury Board.

A clear focus for developing common environmental reporting standards is lacking

The lack of central leadership is having a negative impact on implementing performance measurement and reporting.

2.78 We expected that the government would designate an authority to co-ordinate and oversee reporting of progress on implementing sustainable development. This authority would ensure that reporting to Parliament allowed for the oversight of departmental performance as well as aggregate performance. We would also expect this authority to develop standards for reporting by departments. The objective of these standards would be to promote the preparation of consistent and credible environmental performance information by departments in a format that could be consolidated. Further, this authority would aggregate the information into a government-wide performance report for Parliament. The need for aggregate reporting on the status of the overall greening process has been identified by the Auditor General in previous reports.

2.79 **Leadership is fragmented.** No organization has been given the responsibility, or sees itself as the lead, for establishing a consistent, consolidated and coherent federal approach to reporting environmental performance. The Treasury Board Secretariat suggests that leadership should be provided by lead policy departments. Environment Canada states that it is not its role to assist all departments in developing an environmental management system, although it is willing to share its model.

2.80 In our opinion, this lack of central leadership is having a negative impact on implementing performance measurement and reporting. Although some departments have incorporated the experiences, products, procedures and protocols developed by other departments or in interdepartmental committees, they noted that a more focussed government approach would be beneficial. As well, departments noted that a government-wide long-range action plan, outlining priorities for environmental management, would help them better anticipate the government's central direction and align departmental action plans. However, today there is no such action plan and essentially each department is working on its own timetable and its own set of priorities for implementing performance measurement.

2.81 **The Treasury Board Secretariat sees its role as a facilitator**. Ministers are individually responsible for reporting results of greening activities within their own departments. The Treasury Board Secretariat is responsible for co-ordinating the preparation of the departmental performance reports. However, the Secretariat describes its role as primarily one of facilitation, encouraging the development of mechanisms to support horizontal reporting and identifying opportunities for future improvements. The Results Measurement and Accountability Directorate of the Treasury Board Secretariat examined the current state of performance reporting for sustainable development as a whole. It concluded that consolidating performance indicators would improve reporting of the government's sustainable development agenda, of which greening government operations is a significant part. We support the Secretariat's conclusions and its efforts to improve, collect and provide access to performance information. In our opinion, something more than facilitation is required. It is unlikely that a facilitator would be able to develop environmental reporting standards to allow for consistent and credible departmental reporting that could be further consolidated into an aggregate government-wide performance report.

Is there leadership elsewhere?

2.82 There are a number of interdepartmental initiatives under way dealing with performance measurement and reporting for greening of operations. At the operational level, the interdepartmental Committee on Performance Measurement for Sustainable Government Operations was established in 1997 to define and promote the use of common measurement, and to provide a focus for performance measurement and reporting for greening of operations. The Committee has prepared a list of proposed performance indicators for a number of environmental aspects and has issued an interpretation guide. However, as noted previously, these measures are currently not being used in external reporting and the Committee has no authority to ensure that they are used.

2.83 Another interdepartmental committee, the Federal Committee on Environmental Management Systems, was established in 1995 for departments to share experiences, information and tools for implementing environmental management systems. In addition, there is an Interdepartmental Network for Sustainable Development Strategies. The Network proposed eight initiatives for co-ordinating sustainable development within the government, two of which are relevant to this audit: Federal House in Order: A Strategy for Excellence; and Knowledge and Information/Indicators and Reporting. However, as of January 2000, these initiatives had just been created, and a co-ordinated action plan for sustainable development, as conceived by the Network, had yet to be developed, approved or implemented.

Each department is working on its own timetable and its own set of priorities.

2.84 As noted previously, there is an initiative under way to address Canada's Kyoto Protocol commitments to reduce greenhouse gas emissions. However, the working group responsible for this initiative does not have the necessary data on baseline and current-year levels of greenhouse gas emissions to set annual government-wide reduction targets for greenhouse gas emissions. Obtaining these data is fundamental to the development of an accountability framework that will ensure the ongoing federal contribution to meeting the Kyoto Protocol commitments and to reporting their progress.

Current interdepartmental initiatives are incomplete and ad hoc.

2.85 In summary, interdepartmental initiatives are a valuable first step in providing frameworks and guidance. But current interdepartmental initiatives are incomplete and ad hoc, and there is no central authority to co-ordinate, formalize and approve proposals. Without central leadership and a sense of urgency, we question whether departments can successfully implement performance measurement systems and whether government-wide reporting will ever become a reality.

The Time for Action Is Now

2.86 **Getting the federal house in order by 2002.** We estimate that it can take up to five years to fully implement performance measurement for greening of operations. Departments embarked on this journey in 1997 with the tabling of their sustainable development commitments. By 2002 we expect the government to be able to produce a government-wide performance report on greening operations. Several steps can be taken now to improve and hasten implementation.

By 2002 we expect the government to be able to produce a government-wide performance report on greening operations.

2.87 Action needed by fall 2001. By the fall of 2001, we expect all 30 departments to have fully implemented all elements of the performance measurement framework and to be measuring and reporting on all applicable environmental aspects pertaining to greening operations in buildings and facilities. The wide variation in the level and rate of progress among the 30 departments is a concern. The government's recent reaffirmation in the Speech from the Throne of its commitment to greening operations indicates that the time for action is now.

2.88 Departments should take immediate action to:

- **address the gaps in collecting baseline data and operational data in a systematic manner;**
- **set quantifiable and time-bound targets and report results using performance indicators that are linked to the targets and to departmental and government-wide environmental commitments;**
- **address the gaps in measuring and reporting performance in compliance with legislative requirements;**
- **pursue greening initiatives for departmental operations that take place in leased buildings and facilities;**
- **integrate performance measurement for greening of departmental operations that take place in leased buildings and facilities into environmental performance measurement frameworks; and**
- **clearly articulate, in the next departmental sustainable development strategies, the scope of departmental commitment to greening operations in both leased and owned buildings and facilities. The owner's and the tenant's responsibilities should be identified.**

2.89 As central custodian, Public Works and Government Services Canada should provide leadership and work with departments to implement appropriate performance measurement for greening of operations in leased buildings and facilities.

Public Works and Government Services Canada's response: *Public Works and Government Services Canada (PWGSC), as a common service agency, is working with other departments to improve measures for greening tenant department operations in both Crown-owned and Crown-leased facilities. PWGSC procurement practices facilitate the purchase of environmentally responsible goods and services by client departments, and incentives exist in PWGSC's standard leasing practices to encourage environmentally responsible behaviour. The updated PWGSC sustainable development strategy will include identification of accountabilities for reporting and monitoring results in a way that will respect the relative mandates of custodian departments, tenant departments and owners. The updated strategy will also include a performance reporting framework for facilities leased by PWGSC and occupied by other government departments. Performance reporting for Crown-owned buildings for which PWGSC acts as custodian has been ongoing since 1997-1998, with the Department continually working to improve targets, measures and baseline data.*

The lack of sustained central leadership is a concern.

2.90 The lack of sustained central leadership is a concern. The government needs to establish a systematic federal approach to measuring and reporting performance for greening of operations. It also needs to develop the capacity to aggregate departmental performance information for greening of operations into a consolidated government-wide report for Parliament.

2.91 The Privy Council Office should work with lead organizations, including the Treasury Board Secretariat, Environment Canada, Natural Resources Canada and Public

Works and Government Services Canada, to establish an action plan and timetable for building capacity for environmental performance measurement and reporting. This action plan should designate responsibility and/or shared responsibility for:

- **developing reporting standards and conventions;**
- **providing guidance to departments and updating current guidelines;**
- **greening and measuring performance in leased facilities;**
- **designating a common set of environmental indicators for aggregate reporting;**
- **formalizing and organizing interdepartmental initiatives currently under way;**
- **co-ordinating the preparation of aggregate performance data;**
- **verifying the integrity of the aggregate performance data; and**
- **reporting aggregate performance data.**

2.92 The window of opportunity is closing. Unless the government develops an action plan now, it will lose the window of opportunity to influence the departmental sustainable development strategies due in December 2000 and the 2001 departmental performance reports.

Conclusion

2.93 The need to manage horizontal issues such as the greening of operations is a reality of modern government. At the operational level, the commitment to greening operations is evident. However, demonstrating progress in getting its own house in order is an integral part of the government's stewardship responsibilities and its contribution to sustainable development. The government's commitment to greening its own operations spans the last 10 years, but it still cannot provide Parliament, or Canadians, with an overall picture of its progress. As well, it cannot report on results against government-wide targets such as the commitment to reduce greenhouse gas emissions. If the government cannot demonstrate that it can effectively manage and report on its operational performance, how can it deal with the larger, more complex task of integrating sustainable development into decision making for government policies and programs?

The government still cannot provide an overall picture of its progress.

Joint departmental response co-ordinated by the Privy Council Office: *Performance measurement is essential for tracking progress. As the Commissioner acknowledges, the move to full implementation of performance measurement for greening of operations can take up to five years. A number of departments have made significant progress in developing environmental management systems and using them to focus on their respective priorities.*

The recommendations in this chapter provide a clear and useful indication of measures that departments could adopt to strengthen implementation of the government's commitment to greening its operations. Full implementation of performance measurement is a longer-term and ongoing process.

The next round of departmental sustainable development strategies will reflect the lessons learned over the last few years. The extent of the challenge varies widely among departments, given the great diversity of government operations. These recommendations will be taken into account as those strategies are prepared and as departments review their immediate and longer-term activities in light of the Report.

In the Speech from the Throne, the government has reaffirmed its commitment *to make itself a model of environmental excellence in its own operations and to report to Canadians.*

This chapter deals with the processes involved in reporting on the greening of operations, not on the actual activities undertaken to further that objective. In fact, departments have made progress in developing their respective environmental management systems and in using those systems to focus on the priority aspects of their activities. Sight should not be lost on the significance of that, especially given the magnitude, scope and complexity of government activity.

That said, the chapter's comments regarding the importance of common environmental indicators for government operations and collective reporting are accepted. Departments will continue their efforts to adopt common indicators and improve their reporting in accordance with the priorities identified by their respective environmental management systems. It is evident that the capacity to accomplish this needs to be improved across the range of departmental activities.

An action plan such as that recommended and an accountability framework would clearly contribute to more uniform reporting of progress. The necessary steps will therefore be taken to ensure that the departments that are most able to act effectively in this regard play their appropriate leadership roles.

To that end, the Privy Council Office has begun discussion, with the departments named, about the appropriate accountabilities to manage this horizontal issue effectively.

About the Audit

Three years ago, we began the project Accounting for Sustainable Development. The main emphasis of the project was on building the capacity of departments and agencies to implement some key elements of sustainable development. Our previous study work relevant to this audit focussed on helping departments to build the tools for measuring the environmental impacts of their operations. This year we shifted the focus of our work from capacity building to audit. We concentrated exclusively on environmental performance of departments' internal operations.

Objective

Our audit objective was to provide Parliament with an assessment of the status of departmental progress in implementing performance measurement for greening of operations. We also wanted to assess the capacity for government-wide performance reporting to Parliament on greening operations. We expect that the results of this audit will assist departments and agencies in planning and implementing environmental performance measurement for government operations and improve the information available for departmental decision makers and for Parliament. The audit will also provide important baseline information for the Commissioner of the Environment and Sustainable Development for future audit work.

Scope

Our audit assessed the implementation of performance measurement for greening of operations in the 28 departments and agencies that tabled sustainable development strategies in December 1997. As well, Parks Canada and the Canadian Food Inspection Agency were included in our audit.

Approach

To obtain the necessary evidence and assess progress, we asked departments to complete a questionnaire. The questionnaire asked such things as the following:

- Which environmental aspects are applicable to operations?
- Which performance indicators are used to track performance?
- Have baseline data been established for the applicable environmental aspects?
- Which targets have been set for the environmental aspects?
- Have performance results been reported?
- What constraints have been encountered in implementing performance measurement for greening of operations?

We also asked departments to provide their plan for implementing environmental performance measurement, examples of benefits and corrective actions resulting from performance measurement, and samples of performance reports.

We analyzed but did not audit the information contained in responses to our survey questionnaire. We relied on departmental representations in the questionnaire and on our review of supporting documentation provided by departments to obtain audit assurance for our findings dealing with departmental progress.

We also conducted interviews with key personnel involved in environmental performance measurement and reporting at the Treasury Board Secretariat, Public Works and Government Services Canada, Natural Resources Canada and Environment Canada. We reviewed relevant files, reports and other documentation as they came to our attention. Finally, we monitored the work of the various interdepartmental initiatives pertaining to greening of operations and performance measurement.

Criteria

Throughout the chapter we articulate our many expectations for performance measurement in greening government operations.

Our specific expectations for assessing departmental progress, in terms of both completeness and quality, were based on a performance measurement framework that includes defining scope and direction, designing a measurement system, collecting baseline information, setting targets, reporting, and reviewing and improving performance. Our expectations for implementing the elements of this framework are described in Exhibit 2.2 in the chapter. This framework is consistent with the international ISO 14031 standard and was introduced in Chapter 8 of the Commissioner's 1999 Report.

Audit Team

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Appendix A

Glossary

Accounting for sustainable development — an information tracking framework that (1) integrates internal (private) and external (societal) costs and benefits, and (2) supports evaluations of the short- and long-term consequences of activities and projects from environmental, social and economic perspectives. (Source: Commissioner of the Environment and Sustainable Development)

Environmental aspect — element of an organization's activities, products or services that can interact with the environment, provide information to internal or external users. (Source: *International Organization for Standardization*, ISO 14031)

Environmental impact — any change to the environment, adverse or beneficial, wholly or partially arising from an organization's activities, products or services. (Source: *Full Cost Accounting from an Environmental Perspective*, CICA, 1997)

Environmental performance — the results of an organization's management of its environmental impacts. (Source: ISO 14031)

Environmental performance indicator — a specific expression that provides information about an organization's environmental performance. (Source: ISO 14031)

Environmental target — detailed performance requirement, quantified where practicable and applicable to the organization or parts of it, that arises from the environmental objectives and that needs to be set and met in order to achieve the objectives. (Source: ISO 14031)

International Organization for Standardization (ISO) — a worldwide federation of national standards bodies that prepares international standards. International Standard ISO 14031 "Environmental Performance Evaluation" supports ISO 14001 and 14004. It is a draft international standard giving guidance on the design and use of environmental performance evaluation within an organizations. (Source: ISO 14031)

Greening of government operations — an initiative for all federal departments on how to integrate environmental considerations into the management of their operations. (Source: *A Guide to Green Government*)

Sustainable development — development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Source: *Auditor General Act*)

Appendix B

List of Departments Surveyed

Here is a list of the 30 departments that we asked to complete our questionnaire:

Agriculture and Agri-Food Canada
Atlantic Canada Opportunities Agency
Canada Customs and Revenue Agency
Canadian Environmental Assessment Agency
Canadian Food Inspection Agency
Canadian Heritage
Canadian International Development Agency
Citizenship and Immigration Canada
Correctional Service Canada
Environment Canada
Economic Development Agency of Canada for the Region of Quebec
Department of Finance
Fisheries and Oceans
Department of Foreign Affairs and International Trade
Health Canada
Human Resources Development Canada
Indian and Northern Affairs Canada
Industry Canada
Department of Justice
National Defence
Natural Resources Canada
Office of the Auditor General of Canada
Parks Canada
Public Works and Government Services Canada
Royal Canadian Mounted Police
Solicitor General Canada
Transport Canada
Treasury Board Secretariat
Veterans Affairs Canada
Western Economic Diversification Canada

Chapter 3

Government Support for Energy Investments

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Government Support for Energy Investments

Main Points

3.1 We undertook this study to give Parliament comprehensive information on the support provided by government for energy investments and to determine whether this support favours the non-renewable energy sector. We were particularly interested in support through the tax system because it is less transparent than direct support. We also wanted to explore reasons why energy from renewable sources, other than large-scale hydro-electric projects, makes up a small portion of Canada's energy mix. We sought to determine whether tax incentives are a major contributor to this situation.

3.2 Overall, we found that with a few exceptions, federal government support today for energy investments, including support through the tax system, does not particularly favour the non-renewable sector over the renewable sector. We also found that in the past, governments have intervened in energy markets for various reasons through direct spending, regulations and tax incentives. Most of the federal spending and tax incentives have been for non-renewable resources, the predominant source of energy in Canada.

3.3 All forms of energy are competing for investment dollars against many other investment opportunities. Investments with higher rates of return, established markets and good track records are the ones that attract investors. Most investors we surveyed find that many renewable energy investments do not currently have these features. As well, the payback period is often too long for investments in renewable energy and energy efficiency to make them the preferred choice.

3.4 The federal government stated in its 1996 Renewable Energy Strategy that it wants to increase investments in renewable energy. It has also said for many years that it wants Canadians to use energy more efficiently. Given the barriers we have identified, the federal government may wish to consider developing new strategies and approaches to accomplish its stated objectives for investments in renewable energy and energy efficiency.

Background and other observations

3.5 In December 1997, Canada and 160 other nations negotiated the Kyoto Protocol, an agreement on climate change to reduce emissions of six important greenhouse gases, including carbon dioxide. (The main source of human-induced greenhouse gas emissions in Canada is the production and consumption of fossil fuels, such as oil, natural gas and coal.) For its part, Canada committed to reducing its emissions to six percent below 1990 levels by 2008–2012. But Canada's emissions were already 13 percent above 1990 levels by 1997 and are expected to keep growing. Unless Canada takes new measures, Natural Resources Canada estimates that Canada will actually have to reduce emissions by at least 26 percent from their forecast levels to meet the Kyoto target.

3.6 For the purpose of this study, "non-renewable sources of energy" included oil, natural gas and coal (which are fossil fuels) and nuclear power. "Renewable sources of energy" included water (large-scale and small-scale hydro-electric projects), wind, the sun, the photovoltaic cell (energy produced by exposing to light two dissimilar materials), biomass (plant materials and animal waste), ethanol, geothermal power (heat energy produced in the earth), and waves or tides.

3.7 Governments have used the tax system to encourage exploration for and development of various sources of energy. Most of the federal tax provisions that exist today accelerate the write-off of an expense for tax purposes. This means that the taxpayer reduces current taxes but pays higher taxes later. Accelerated write-offs are a benefit mainly because of the "time value" of money. Investors who can reduce current taxes are able to achieve a higher rate of return on their investment and have more cash for other investments.

3.8 An adequate rate of return on investment was the factor most frequently mentioned by our survey respondents in assessing the potential of an investment project. As the International Energy Agency pointed out, many renewable energy projects do not yet provide an adequate rate of return to make them a desirable investment. Three reasons for this are markets are difficult to enter, renewable energy products generally cost more than non-renewable ones, and payback periods are often longer.

Introduction

3.9 In December 1997, Canada and 160 other nations negotiated the Kyoto Protocol, an agreement on climate change to reduce emissions of six important greenhouse gases, including carbon dioxide. (The main source of human-induced greenhouse gas emissions in Canada is the production and consumption of fossil fuels, such as oil, natural gas and coal.) For its part, Canada committed to reducing its emissions to six percent below 1990 levels by 2008–2012. But Canada's emissions were already 13 percent above 1990 levels by 1997 and are expected to keep growing. Unless Canada takes new measures, Natural Resources Canada (NRCan) estimates that Canada will actually have to reduce emissions by at least 26 percent from their forecast levels to meet the Kyoto target.

3.10 The ministers of energy and the environment in the federal, provincial and territorial governments approved a process in April 1998 to develop a national implementation strategy to address climate change. Sixteen "issue tables" or working groups, involving about 450 people with many perspectives on climate change, were created to examine the impacts, costs and benefits of implementing the Kyoto Protocol. Each issue table is expected to develop a set of options for consideration by the ministers over a series of meetings in 2000–2001.

3.11 Two important ways to address climate change are using energy more efficiently and establishing a more sustainable mix of energy sources, which means a greater reliance on renewable sources. Using energy more efficiently is widely recognized as an effective way to reduce greenhouse gas emissions, particularly carbon dioxide. Renewable energy sources, such as water, biomass (plant materials and animal waste), wind and the sun, can provide Canada with a secure supply of energy over the long term in an environmentally friendly way.

3.12 For the purpose of this study, "non-renewable sources of energy" included oil, natural gas and coal (which are fossil fuels) and nuclear power. "Renewable sources of energy" included water (large-scale and small-scale hydro-electric projects), wind, the sun, the photovoltaic cell (energy produced by exposing to light two dissimilar materials), biomass, ethanol, geothermal power (heat energy produced in the earth), and waves or tides. "Other sources of energy" included methanol/methane and the hydrogen fuel cell. These sources can be renewable or non-renewable.

Overview of the energy sector

3.13 The economic development of modern societies depends on energy. Exhibit 3.1 shows the many sources of energy and their uses. According to NRCan, the Canadian consumption of energy in 1997 was 39 percent in the industrial sector, 27 percent in the transportation sector, 18 percent in the residential sector, 13 percent in the commercial sector, and 3 percent in the agricultural sector. In Canada, the consumption of energy varies by region because of population patterns, the climate and the mix of industrial activities.

The economic development of modern societies depends on energy.

3.14 In 1997, 24 percent of Canada's energy needs were met by electricity. To determine its environmental effects, it is important to understand how electricity is produced. Over half of Canada's electricity is generated from hydro-electric projects, mostly large-scale ones that can have negative impacts on the environment when flooding is required to create large reservoirs. The rest of the country's electricity is produced mostly by nuclear power reactors and the burning of fossil fuels. Some forms of renewable energy, such as wind, solar energy and biomass, also produce electricity, but the total amounts are small.

3.15 NRCan has projected Canada's growing energy requirement to 2020. As Exhibit 3.2 shows, non-renewable sources will be used to meet most of this requirement. However, extracting, producing and burning fossil fuels creates greenhouse gases, which have implications for climate change. Either domestic or foreign sources of energy can satisfy Canadian requirements. As long as Canadians and Canadian industry need more energy and are willing to pay for it, suppliers will provide it.

3.16 Domestic requirements for energy combined with export opportunities drive Canadian energy production. For some energy products such as electricity, there is a fairly close link between Canadian requirements and Canadian production. For others such as oil and gas, the link is not as close.

3.17 Non-renewable sources of energy tend to be traded on international markets, which set their prices. Changes in Canadian production will not necessarily affect the amount Canadians consume or the price they pay. However, international changes in the price or supply of these energy sources could well affect Canadian consumers. Canada has large reserves of oil, natural gas and coal and using them to meet Canadian energy requirements, thus, has some economic advantages.

3.18 Canada has a large and vibrant oil and gas industry. Net spending of the upstream sector of the industry (exploration and production) was about $28.4 billion in 1998. That year, companies produced over 2 million barrels of crude oil a day and about 16 billion cubic feet of natural gas a day and exported about half of this production. The upstream oil and gas sector employs over 70,000 people. From 1991 to 1997, the oil and gas industry recorded operating profit margins of 9.1 percent on average, compared with 6.6 percent for all industries. It recorded a return on capital of 5.5 percent on average, compared with 5.8 percent for all industries.

3.19 Renewable sources of energy tend to be produced, priced and consumed in a more local or regional market. These sources are competitive in their markets if they are available and if their cost is comparable with other energy options.

3.20 Both renewable and non-renewable sources of energy need capital to grow. However, they do not necessarily compete with each other for investment dollars. Rather, investors look

Exhibit 3.1

Energy Sources and Uses

	Non-renewable					**Renewable**								**Other[3]**	
Source / Use	Oil	Natural gas	Coal	Nuclear power	Propane	Water (hydro-electric)	Wind	Sun	Photovoltaic cell	Biomass	Ethanol	Geothermal power	Waves and tides	Methanol/Methane	Hydrogen fuel cell
Transportation[1]	✓	✓			✓					✓	✓			✓	✓
Residential[2]	✓	✓			✓			✓		✓		✓			
Commercial[2]	✓	✓			✓			✓				✓			
Industrial[2]	✓	✓	✓					✓		✓					
Agriculture[2]	✓	✓			✓		✓	✓							
Electricity	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓

[1] Excludes the use of electricity.

[2] Excludes the use of electricity and transportation.

[3] Other sources of energy can be renewable or non-renewable.

Source: Office of the Auditor General of Canada and the Commissioner of the Environment and Sustainable Development for investments that meet their specific objectives, including a desired rate of return.

Energy policy, a shared responsibility

3.21 Jurisdiction over energy policy is shared between the federal and provincial governments. The provinces own energy resources and develop energy and taxation policies and regulations on the management of these resources. The federal government mainly deals with interprovincial and international movement of energy and energy-using equipment as well as projects that extend beyond a province's borders. It also regulates the nuclear industry in Canada. In addition, the federal government has broad taxation and spending powers. Both levels of government have responsibilities for protecting the environment.

3.22 Federal energy policy has evolved over the last three decades. During the mid-1970s and early 1980s, the government wanted to ensure that Canadians had a secure supply of energy at an affordable price. As world oil prices fell and supplies increased in the late 1980s and early 1990s, the focus shifted to developing Canadian energy resources and improving regional economies. Today's stated energy policy is market-based and increasingly shaped by Canada's domestic and international commitments, such as the North American Free Trade Agreement and the Kyoto Protocol. The planned national implementation strategy for dealing with climate change may have a significant effect on future energy policy.

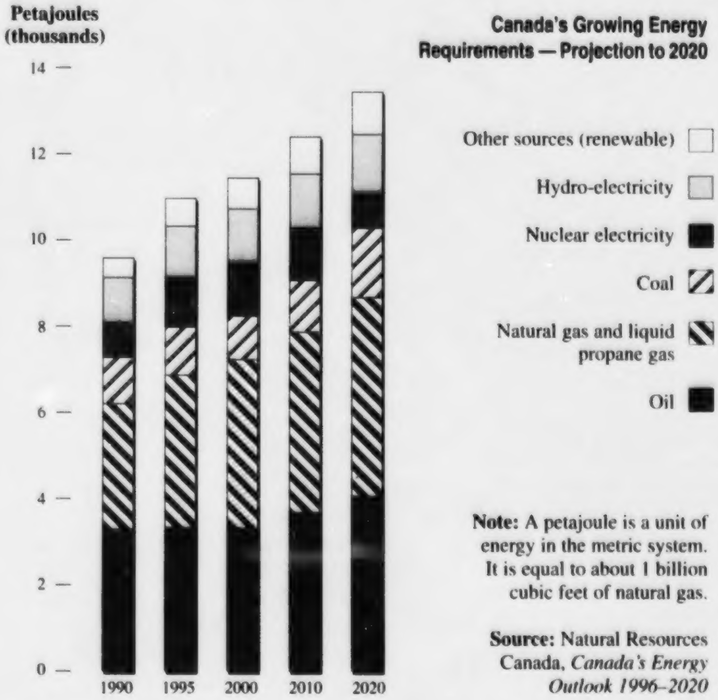
3.23 In October 1996, NRCan released its *Renewable Energy Strategy: Creating a New Momentum*. Its objective is to bring Canadian renewable energy technologies into commercial use more quickly by enhancing investment conditions and promoting technology and market development initiatives. In April 1998, NRCan established the Office of Energy Efficiency with the mandate to renew, strengthen and expand Canada's commitment to energy efficiency.

Focus of the study

3.24 Governments have supported the exploration for and development of energy from non-renewable and renewable sources and encouraged energy efficiency over the years for various reasons. These include securing the supply of energy, especially during oil crises, developing regional economies and addressing environmental concerns. Some believe that the non-renewable sector has enjoyed and continues to enjoy more support than the renewable sector. Many have said that there are hidden subsidies in the tax system for investments in the non-renewable energy sector. Furthermore, some have argued that the renewable energy sector in Canada is not expanding as quickly as it should, largely because of government action, or inaction.

Exhibit 3.2

Canada's Growing Energy Requirements — Projection to 2020



Note: A petajoule is a unit of energy in the metric system. It is equal to about 1 billion cubic feet of natural gas.

Source: Natural Resources Canada, *Canada's Energy Outlook 1996–2020*

3.25 We undertook this study to give Parliament comprehensive information on the support provided by the federal government for energy investments and to determine whether this support favours the non-renewable energy sector. We were particularly interested in support through the tax system because it is less transparent than direct support. While our focus was on energy investments, we reviewed other significant federal government interventions in the energy sector. We also wanted to explore reasons why energy from renewable sources, other than large-scale hydro-electric projects, makes up a small portion of Canada's energy mix. We sought to determine whether tax incentives are a major contributor to this situation.

3.26 For more information on this study, see **About the Study** at the end of the chapter.

Observations

Government Spending and Regulation

Federal and provincial governments have intervened in energy markets almost since their beginning.

3.27 Federal and provincial governments have intervened in energy markets almost since their beginning. Government policies have controlled or influenced particular activities through direct spending, regulation and tax incentives to provide Canadians with a secure supply of energy, to develop regional economies and to address environmental concerns. Appendix A presents highlights of federal government spending and regulation related to energy investments. In the past, much of this was focussed on non-renewable resources, the predominant source of energy in Canada. Sometimes the spending and regulation benefited mainly the producers of non-renewable resources; at other times consumers were the main beneficiaries.

Federal spending

3.28 We analyzed federal spending on energy reported in the Public Accounts of Canada and departmental reports on plans and priorities (formerly a portion of Part III of the Main Estimates) from 1970–71 to 1998–99. Exhibits 3.3 and 3.4 break down the spending over this period by energy source. We included payments to third parties and government programs that relate to investments in energy. We excluded general operating expenses of departments and regulatory expenses of agencies concerned with energy matters. We also excluded federal spending on energy to power, heat and cool facilities or run vehicles and other equipment.

3.29 For non-renewable resources, other than nuclear power, the federal government's greatest spending occurred between 1974 and 1986 during the days of oil import compensation payments (OICPs) and the National Energy Program (NEP).

3.30 The government introduced OICPs in 1974 so that consumers in Quebec and Atlantic Canada, who were then completely dependent on imported oil, would be protected against increases in world oil prices. The payments had totalled about $13.6 billion by the time they ended in 1985. A tax on crude oil exports helped to finance the payments.

3.31 The NEP was introduced in 1980 and, among other things, retained the government's objective of a single "made-in-Canada" oil price set below world levels. The NEP imposed a refinery levy, the petroleum compensation charge, to help achieve this objective. By the end of the regime following the signing of the Western Accord in 1985, the petroleum compensation charge had raised about $11.3 billion from refiners, of which $11.1 billion was paid out to the first users (usually other refiners) of high-cost petroleum. Under the NEP, the government encouraged exploration and sought to increase Canadian ownership in the oil and gas industry by paying some $7.7 billion in cash grants under the Petroleum Incentives Program.

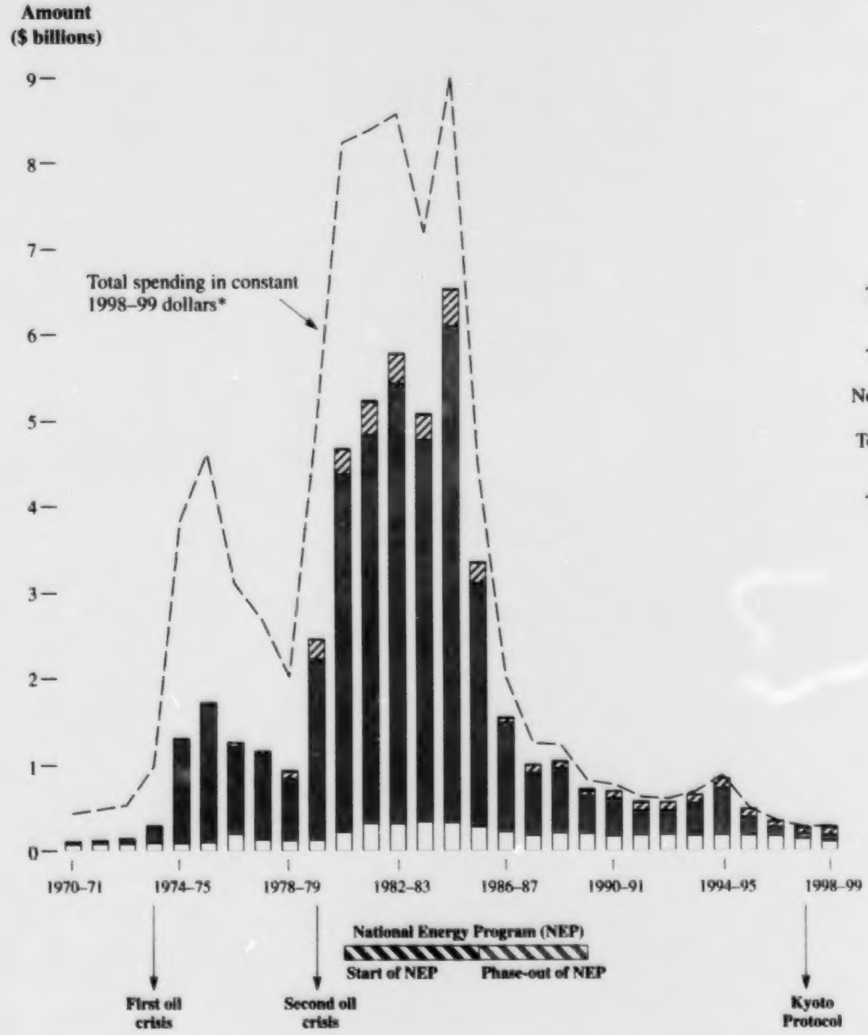
3.32 In the late 1980s and early 1990s, the federal government supported energy megaprojects, such as the Hibernia Development Project and heavy oil upgraders. Since 1995, federal government spending on non-renewable energy resources has been reduced significantly.

3.33 The development of nuclear technology in Canada began in the 1940s. In 1944, the federal government started constructing a research facility at Chalk River, Ontario. Since 1946, the federal government has spent about $6 billion on nuclear technology, mostly through Atomic Energy of Canada Limited. As Exhibits 3.3 and 3.4 show, annual spending has declined in recent years.

3.34 The federal government has supported the development and use of

Exhibit 3.3

Direct Federal Spending on Energy, 1970–71 to 1998–99



* The bars in the graph indicate current dollars in the years shown.

Source: Public Accounts of Canada and Natural Resources Canada renewable energy technologies for over 20 years, mainly through research and development programs and tax incentives. At first, this was because it wanted to be certain that Canada had a secure supply of energy. Now it is more concerned about the environmental impacts of using non-renewable resources to produce energy. The federal government is spending around $12 million annually to support renewable energy technologies.

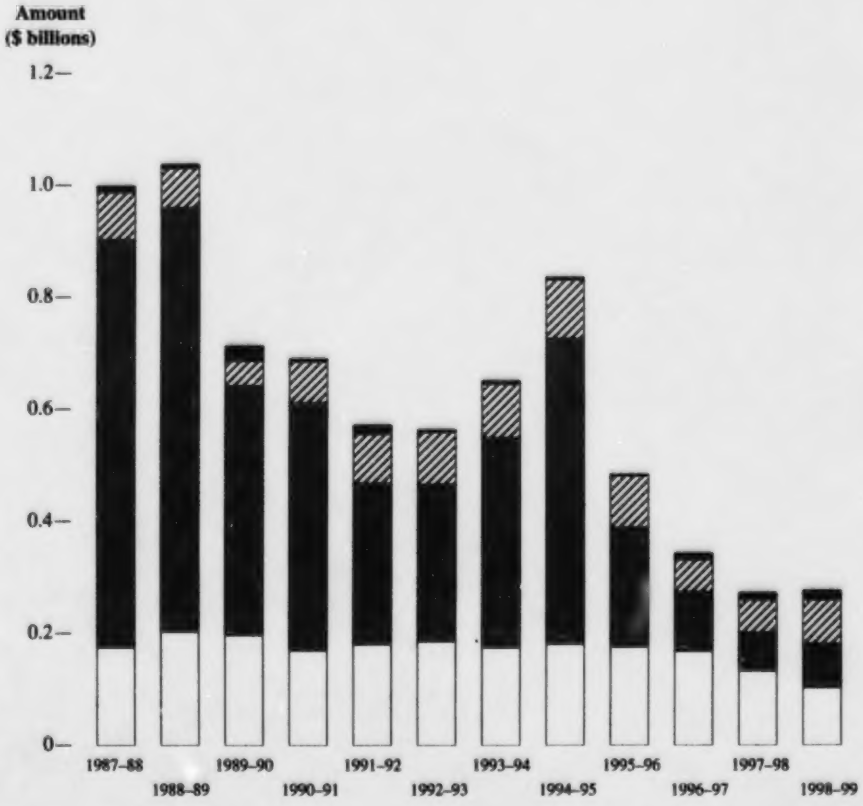
3.35 The federal government has also promoted energy conservation and energy efficiency for many years. In the late 1970s, spending on energy efficiency programs grew significantly (see Exhibit 3.3). Grant programs, such as the Canadian Home Insulation Program, were used to convince energy users to become more energy-efficient. By the mid-1980s, spending on energy efficiency dropped substantially. In the early 1990s, the federal government re-emphasized energy efficiency and energy from alternative sources and began to regulate the energy efficiency of products that use energy. In recent years, it has spent about $64 million annually on energy efficiency activities.

Other federal support

3.36 The federal government has also supported the energy sector by investing in companies, granting loans, remitting certain taxes and export charges, and assuming certain potential losses (contingent liabilities). Since 1970, the federal government has written off $2.8 billion of its investments and loans for energy projects in the non-renewable sector; this is in addition to the amounts shown in Exhibits 3.3 and 3.4. Between 1975–76 and 1981–82, it remitted almost

Exhibit 3.4

Direct Federal Spending on Energy, 1987–88 to 1998–99



Source: Public Accounts of Canada and Natural Resources Canada

$2.4 billion of export and other charges on certain types of oil or oil products that companies exported "when an equal volume was returned to Canada."

3.37 The federal government's reported contingent liabilities related to energy had reached about $950 million on 31 March 1999. These liabilities concern the Hibernia Development Project, the NewGrade heavy oil upgrader, and installations governed by the *Nuclear Liability Act*. They do not include the cost of cleaning up high-level radioactive waste on federal property. Nor do they include the cost of cleaning up low-level radioactive waste, mainly in the Port Hope area of Ontario, and decommissioning sites of uranium tailings. (We estimated these costs to be $850 million in our May 1995 Report, Chapter 3, Federal Radioactive Waste Management.)

The Tax System and Energy Investments

Federal government revenue from energy

3.38 The federal government collects taxes from the production and consumption of energy (see Exhibits 3.5 and 3.6). The largest source of revenue is the excise tax that consumers pay on fuels to run their vehicles and equipment, which raised some $50 billion between 1970 and 1999. The federal government also collects goods and services tax (GST) on a number of energy products and services, but it is difficult to determine the exact amounts.

3.39 From 1973–74 to the late 1980s, the federal government collected about $7.8 billion in oil export taxes, $10.1 billion from the petroleum and gas revenue tax, and, as noted in paragraph 3.31, about $11.3 billion from the petroleum compensation charge. These levies were phased out after the Western Accord was signed in 1985 (see Appendix A).

3.40 The federal government also collects income taxes from producers of energy, except for provincially owned oil and gas companies and utilities. Exhibit 3.6 shows that between 1990 and 1997, the oil and gas and electricity industries paid over $12 billion in federal corporate income taxes.

Current tax incentives for energy investments

3.41 Governments have used the tax system to encourage exploration for and development of various sources of energy. Appendix B highlights some of the ways this support has been provided in the past. Appendix C describes the current income and excise tax provisions that relate specifically to energy investments. These provisions are complex and, when they are used, so is the way they interact with each other, with all the other provisions in the *Income Tax Act* and with provincial tax and royalty regimes.

Governments have used the tax system to encourage exploration for and development of various sources of energy.

3.42 Most of the current federal tax provisions accelerate the write-off of an expense for tax purposes. This means that the taxpayer reduces current taxes but pays higher taxes later (see Exhibit 3.7). Accelerated write-offs are a benefit mainly because of the "time value" of money. Investors who can reduce current taxes are able to achieve a higher rate of return on their investment and have more cash for other investments.

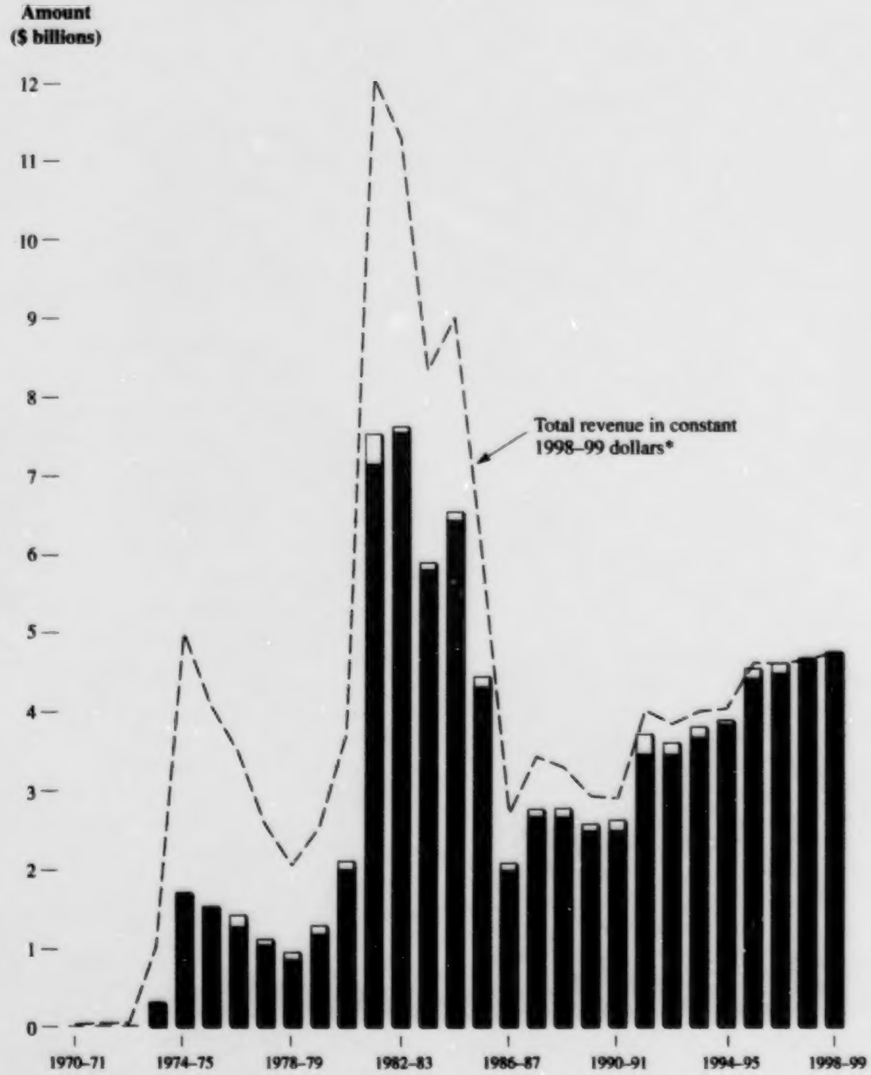
3.43 The incentive for companies is to keep spending and take advantage of the accelerated write-offs to reduce current taxes and put off the day when they have to pay increased taxes. This reaction is what the government had in mind when it designed these tax incentives to encourage investments in non-renewable and renewable resources.

3.44 Accelerated write-offs work best for companies that are making profits and are in a position to pay taxes. For companies that are not, the accelerated write-offs can be carried forward and deducted for tax purposes when the companies become profitable.

3.45 Flow-through shares allow companies to raise funds to carry out certain activities by flowing (or passing) some of their accelerated write-offs to shareholders. A company can issue flow-through shares for Canadian exploration expenses, Canadian development expenses and Canadian renewable and conservation expenses (see Appendix C for definitions). Investors receive equity in the company and can deduct the accelerated write-offs in calculating their taxes. The company cannot deduct the expenses that it has flowed to investors, and it may eventually pay higher taxes. In general, small companies that do not have taxable income are the ones that issue flow-through shares.

Exhibit 3.5

Federal Revenue Collected From Energy, 1970–71 to 1998–99



☐ Non-tax energy revenues
Total revenue = $2.9 billion

■ Other energy taxes (excluding income taxes and the goods and services tax)
Total revenue = $36.1 billion

■ Excise taxes on fuel
Total revenue = $49.6 billion

* The bars in the graph indicate current dollars in the years shown.

Source: Public Accounts of Canada

M121

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Royalties and the resource allowance

3.46 When companies calculate their federal income taxes, they cannot deduct royalties paid to provincial governments for oil, natural gas and minerals. (Normal income tax rules allow a deduction for most amounts that are paid to earn income.) The federal government imposed this restriction in 1974 in part to disentangle provincial royalty regimes from federal income taxes. To compensate for the restriction and to offer more incentives for exploration and development, the government introduced the resource allowance in 1976. In calculating income taxes, companies can deduct a resource allowance that is 25 percent of resource profits from mining and from producing oil and gas. In general terms, resource profits are defined as resource revenue minus associated overhead, operating costs and capital cost allowances (write-offs of capital assets, such as equipment and buildings).

3.47 In recent years, the benefits that the oil and gas industry received as a whole from the resource allowance deduction have roughly offset the increased tax cost arising from the non-deductibility of provincial royalty payments (see Exhibit 3.8). For the mining sector (including coal and uranium mines), the resource allowance generally exceeds royalties. However, the relationship between royalties and the resource allowance differs from one corporation to another. For example, a company with low resource profits would receive a small resource allowance that might not offset the non-deductibility of Crown royalties. But the rules give companies some discretion in calculating the resource allowance, and accelerated write-offs can reduce it significantly.

Current tax incentives for the energy sector are mainly accelerated write-offs that are designed to encourage investment.

3.48 We encourage the Department of Finance to monitor the resource allowance and ensure that it is an appropriate compensation for the non-deductibility of provincial royalty payments.

Estimating resource-related tax expenditures

3.49 Tax expenditures are usually thought of as tax measures, such as exemptions, deductions or tax credits, that the government uses to achieve specific economic and social policy objectives.

Exhibit 3.6

Federal Corporate Income Taxes Paid by Oil and Gas and Electricity Industries

	1990	1991	1992	1993	1994	1995	1996	1997
	($ millions)							
Oil and gas (upstream)	763.2	523.9	639.2	773.2	874.6	1,072.9	1,246.5	1,221.5
Oil and gas (downstream)	388.8	466.1	234.8	437.8	414.4	507.1	556.5	750.5
Total oil and gas	1,152.0	990.0	874.0	1,211.0	1,289.0	1,580.0	1,803.0	1,972.0
Electricity	142.0	143.0	187.0	210.0	231.0	218.0	214.0	257.0
Total income taxes paid by oil and gas and electricity industries	**1,294.0**	**1,133.0**	**1,061.0**	**1,421.0**	**1,520.0**	**1,798.0**	**2,017.0**	**2,229.0**
Total federal income taxes paid by all industries	10,724.0	10,550.0	10,546.0	11,318.0	13,488.0	16,198.0	18,512.0	19,767.0

Source: Statistics Canada

Royalties and the resource allowance

3.46 When companies calculate their federal income taxes, they cannot deduct royalties paid to provincial governments for oil, natural gas and minerals. (Normal income tax rules allow a deduction for most amounts that are paid to earn income.) The federal government imposed this restriction in 1974 in part to disentangle provincial royalty regimes from federal income taxes. To compensate for the restriction and to offer more incentives for exploration and development, the government introduced the resource allowance in 1976. In calculating income taxes, companies can deduct a resource allowance that is 25 percent of resource profits from mining and from producing oil and gas. In general terms, resource profits are defined as resource revenue minus associated overhead, operating costs and capital cost allowances (write-offs of capital assets, such as equipment and buildings).

3.47 In recent years, the benefits that the oil and gas industry received as a whole from the resource allowance deduction have roughly offset the increased tax cost arising from the non-deductibility of provincial royalty payments (see Exhibit 3.8). For the mining sector (including coal and uranium mines), the resource allowance generally exceeds royalties. However, the relationship between royalties and the resource allowance differs from one corporation to another. For example, a company with low resource profits would receive a small resource allowance that might not offset the non-deductibility of Crown royalties. But the rules give companies some discretion in calculating the resource allowance, and accelerated write-offs can reduce it significantly.

Current tax incentives for the energy sector are mainly accelerated write-offs that are designed to encourage investment.

3.48 We encourage the Department of Finance to monitor the resource allowance and ensure that it is an appropriate compensation for the non-deductibility of provincial royalty payments.

Estimating resource-related tax expenditures

3.49 Tax expenditures are usually thought of as tax measures, such as exemptions, deductions or tax credits, that the government uses to achieve specific economic and social policy objectives.

Exhibit 3.6

Federal Corporate Income Taxes Paid by Oil and Gas and Electricity Industries

	1990	1991	1992	1993	1994	1995	1996	1997
	($ millions)							
Oil and gas (upstream)	763.2	523.9	639.2	773.2	874.6	1,072.9	1,246.5	1,221.5
Oil and gas (downstream)	388.8	466.1	234.8	437.8	414.4	507.1	556.5	750.5
Total oil and gas	1,152.0	990.0	874.0	1,211.0	1,289.0	1,580.0	1,803.0	1,972.0
Electricity	142.0	143.0	187.0	210.0	231.0	218.0	214.0	257.0
Total income taxes paid by oil and gas and electricity industries	**1,294.0**	**1,133.0**	**1,061.0**	**1,421.0**	**1,520.0**	**1,798.0**	**2,017.0**	**2,229.0**
Total federal income taxes paid by all industries	10,724.0	10,550.0	10,546.0	11,318.0	13,488.0	16,198.0	18,512.0	19,767.0

Source: Statistics Canada

Exhibit 3.7

The Effects of Accelerated Write-Offs

Facts:

1. In year 1, a company spends $100,000 exploring for natural gas.
2. The company writes off this amount in its books over the production life of the discovered well.
3. The company earns profits of $200,000 each year before the write-off and before taxes.
4. The tax rate is 30 percent.

	Year 1	Year 2	Year 3	Year 4	Year 5
	($ thousands)				
Income recorded in the books:					
Profits earned	200	200	200	200	200
Write-off of exploration expenses	17	17	17	13	9
Income before taxes	183	183	183	187	191
Taxes at 30% (rounded)	**55**	**55**	**55**	**56**	**57**
Income calculated for taxes:					
Profits earned	200	200	200	200	200
Write-off of exploration expenses	100	0	0	0	0
Income before taxes	100	200	200	200	200
Taxes at 30%	**30**	**60**	**60**	**60**	**60**
Reduction in taxes due to accelerated write-off	**25**				
Increase in taxes due to accelerated write-off		**(5)**	**(5)**	**(4)**	**(3)**

If the accounting rules and the tax rules were the same, the company would pay $55,000 of taxes in year 1. However, the accelerated write-off allows the company to deduct the full $100,000 of exploration expenses in year 1 and reduce its taxes for that year by $25,000.

In year 2 the company would pay taxes of $55,000 if the accounting rules and the tax rules were the same. However, because of the accelerated write-off in year 1, the company has no deductions left and the company must pay $60,000 in taxes in year 2, an increase of $5,000.

This trend continues for all future years until the exploration expenses are completely written off in the books.

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2-5

They are often an alternative to direct spending. For example, incentives for research and development can be provided through government grants or through tax credits.

3.50 Current tax incentives for the energy sector are mainly accelerated write-offs that are designed to encourage investment. In these cases, a reasonable proxy for the tax expenditure would be the tax on the difference between the amount written off in the companies' books and the amount written off for taxes. When the tax write-off is greater than the book write-off there is a reduction in taxes and a positive tax expenditure (see Exhibit 3.7). When the tax write-off is less than the book write-off there is an increase in taxes and a negative tax expenditure.

3.51 Estimating total tax expenditures for accelerated write-offs is not an easy task. The provisions are complex, and gathering the appropriate data is difficult. Many of the deductions are discretionary, meaning that the taxpayer can determine how much of the eligible amount is actually claimed in a given year. Furthermore, because accelerated write-offs can result in positive or negative tax expenditures, an annual estimate may not provide an accurate picture of the real cost resulting from the write-offs.

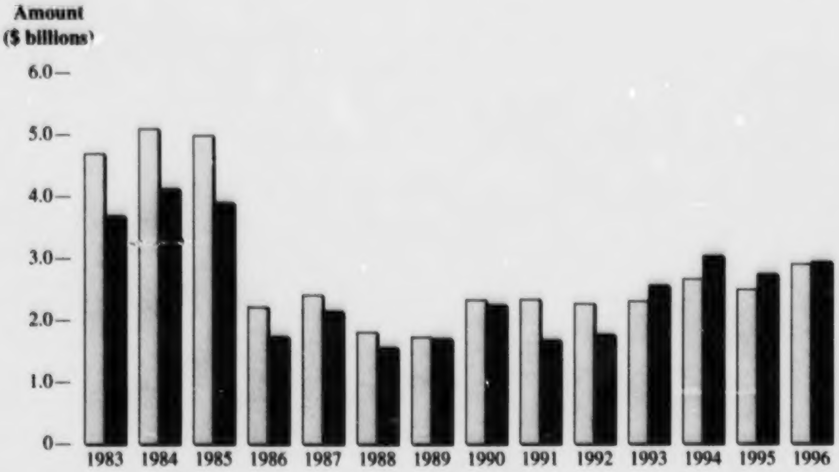
3.52 The Department of Finance has tried to deal with these issues in its annual tax expenditure account by calculating the net present value of the tax benefit that an investor would realize from accelerated write-offs for a hypothetical investment of $100,000. According to the 1999 account, if $100,000 is spent on exploration for non-renewable resources, the net present value of the tax benefit from the accelerated write-off of the expense is $4,800. But this approach does not provide information on total tax expenditures.

No one is now collecting the data needed to estimate total tax expenditures related to accelerated write-offs.

3.53 Furthermore, no one is now collecting the data needed to estimate total tax expenditures related to accelerated write-offs. To get a sense of the size of the difference between the write-offs for book purposes and for tax purposes, we used rough data from Statistics Canada on the oil and gas

Exhibit 3.8

Relationship Between Resource Allowance and Crown Royalties for Upstream Activities in the Oil and Gas Industry, 1983–1996



Note: This table does not include the results of the Gulf Canada case (see the Auditor General's 1993 Report, Chapter 3, Other Audit Observations).

Source: Natural Resources Canada and Department of Finance

industry. As Exhibit 3.9 shows, the tax write-off for physical assets is less than the book write-off, but for exploration and development expenses, the tax write-off is greater than the book write-off. However, it is not possible to estimate a tax expenditure using these data, mainly because the estimates must be calculated for each company to take account of its unique tax situation.

3.54 We encourage the Department of Finance to explore other ways to estimate the total cost of these tax incentives, to determine whether the incentives are meeting their objectives cost-effectively and to determine whether they are still needed.

Is the Current Tax Treatment Similar for Investments in Renewable and Non-Renewable Energy?

3.55 To answer this question asked by many interested stakeholders, NRCan and the Department of Finance published a study in 1996, *The Level Playing Field: The Tax Treatment of Competing Energy Investments*. The main objective of the study was to measure the degree to which the tax system does (or does not) provide comparable levels of support to investments in non-renewable and renewable energy and in energy efficiency.

3.56 The study concluded that while the playing field is not level, there are few variations in the tax treatment of energy projects, except for ethanol and certain energy efficiency projects. The level of tax support for investments in the supply of non-renewable and renewable energy varied between 5 percent and 20 percent of capital costs.

3.57 We reviewed the study and its underlying methodology to determine the accuracy of the findings. The study analyzed a number of projects and showed how much each project is taxed under the current system when compared with a neutral tax system (one that does not have any incentives). Then it determined which projects pay more taxes and which ones pay less.

3.58 We sought to check the results of the *Level Playing Field* study by using a different methodology, called marginal effective tax rates (METRs). This

Exhibit 3.9

Differences Between Amounts Written Off for Tax Purposes and Book Purposes in the Oil and Gas Industry

	1991	1992	1993	1994	1995	1996	1997
	($ millions)						
Physical assets							
Amounts written off for tax purposes	3,076	3,629	4,721	4,692	4,732	5,618	5,152
Amounts written off for book purposes	5,115	5,099	5,435	6,018	6,330	6,272	6,382
Difference	**(2,039)**	**(1,470)**	**(714)**	**(1,326)**	**(1,598)**	**(654)**	**(1,230)**
Exploration and development							
Amounts written off for tax purposes	2,829	3,242	3,209	4,756	4,342	5,676	5,418
Amounts written off for book purposes	1,811	1,799	2,268	3,154	2,336	3,021	3,159
Difference	**1,018**	**1,443**	**941**	**1,602**	**2,006**	**2,655**	**2,259**

Source: Statistics Canada

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Source: Statistics Canada

methodology looks at how the tax system treats marginal investments, that is investments that just meet the investor's acceptable rate of return. Once METRs are calculated for various investments, it is easy to see which ones the tax system does or does not favour.

3.59 We were unable to reach a firm conclusion using the METR methodology because some of the data that we needed to apply the methodology were not available. However, to the extent that we were able to complete the analysis, our results supported the conclusions of the *Level Playing Field* study.

3.60 We reviewed other evidence to determine whether the tax system favours non-renewable energy sources over renewable ones. We also examined the tax provisions for energy investments, including their evolution over time, and consulted people who invest in energy.

3.61 The Minister of Finance's Technical Committee on Business Taxation reported in 1997 on the METRs paid by companies in various industries. The Committee found that the average METR for all industries was 19 percent. Unfortunately, the Committee did not provide METRs for renewable energy.

3.62 For the upstream activities (exploration and development) of the oil and gas industry, the Committee calculated two METRs, depending on how royalties were treated. For purposes of comparing various energy investments, we believe that treating royalties paid to provincial governments as a tax is the preferred treatment. The METR for the upstream activities of the oil and gas industry was 18.2 percent, which was close to the average METR for all industries.

3.63 The downstream activities (refining and marketing) of the oil and gas industry are included in the manufacturing and retail trade industries. The METR was 16.5 percent for the manufacturing industry and 23.2 percent for retail trade. These METRs are reasonably similar to the average METR for all industries.

3.64 The Committee also calculated METRs for mining, including coal. When royalties paid to provincial governments are treated as a tax, the METR was 17.7 percent, which was close to the average METR for all industries.

3.65 It is important to note, however, that the approach used in the *Level Playing Field* study and the methodology for calculating METRs are theoretical. They assume that the tax provisions will be used in a particular manner. The way the provisions are actually applied determines the taxes that companies pay on specific energy investments. For example, most taxpayers can deduct interest on money borrowed for investments when calculating their taxes. Interest is a key component of many energy investments. If companies have the time and the resources to engage in complex tax-planning mechanisms that involve the deduction of interest, they can legally reduce the taxes they pay on particular energy investments.

For current investments, the federal income tax treatment given to renewable and non-renewable energy investments is reasonably similar.

3.66 We found that tax incentives for investing in non-renewable energy were more generous in the past than they are today. For example, the depletion allowances that allowed companies to deduct more than their actual expenses in the 1960s and 1970s are no longer available (see Appendix B). Changes were also made in the 1990s to tighten the income tax rules for calculating the resource allowance.

3.67 We also found that several amendments have been made in recent years that are intended to give similar tax treatment to all forms of energy investment. Investors told us that in most cases, the federal income tax treatment for renewable energy and non-renewable energy is similar but they desire further changes to ensure that all of the available provisions can be used.

Many renewable energy projects do not yet provide an adequate rate of return to make them a desirable investment for several reasons.

3.68 At the same time, there are three important exceptions to this similar tax treatment. First, the tax system does not give any preferential treatment to certain investments that improve energy efficiency. For example, installing energy-efficient windows in a building is treated the same way for taxes as installing regular windows. Any encouragement to install energy-efficient windows has to come from other sources, such as reducing heating and cooling costs over time. Investors who want to have their investment repaid in a short period of time would likely choose regular windows if they were cheaper.

3.69 Second, investments in oil sands, like all mining investments including coal, receive a significant tax concession (see Appendix C). The rules allow companies to write off all capital costs for a project before they pay any federal income taxes on the profits earned from the project. These provisions recognize the risks involved in oil sands investments and the potential economic benefits, but they make the investments more attractive than they otherwise would be. The Department of Finance estimates that the benefit of this tax concession is between $5 million and $40 million for every $1 billion invested. As well, Alberta charges lower royalty rates during the early years of an oil sands project than it does for conventional oil and gas.

3.70 Third, alternative fuels, such as ethanol produced from renewable sources, propane, compressed natural gas and methanol, are exempted from the federal excise tax. For blended fuels, the tax exemption applies only to the proportion of the exempt fuel in the product.

3.71 Based on our review of the evidence, for current investments, the federal income tax treatment given to renewable and non-renewable energy investments is reasonably similar except for certain investments in energy efficiency, oil sands, coal mines and alternative fuels. Nevertheless, the interaction between the federal and provincial tax systems and the applicable provincial royalty regimes could result in dissimilarities in the overall treatment of energy investments.

Investing in Renewable Energy and Energy Efficiency

3.72 Renewable energy appears to be having difficulty getting established, despite its environmental benefits. The exception is large-scale hydro-electric projects, which are generally financed by provincial utilities and operate in a highly regulated market. We sought to determine some of the reasons for this difficulty, given that the current tax system does not significantly discriminate against renewable energy investments. We conducted a survey of a broad cross-section of individuals and small, medium-sized and large companies that invest in energy. We also reviewed some of the literature on energy investments.

3.73 In 1997, the International Energy Agency published *Key Issues in Developing Renewables*. It noted that most forms of renewable energy still had a long way to go before they could compete with fossil-fuel technologies, especially for generating electrical power. The Agency added that financiers and manufacturers were reluctant to invest the capital needed to reduce costs when consumer demand for renewable energy was low and uncertain. But demand stayed low because potential cost reductions cannot always be realized at low levels of production.

3.74 The Agency cited three major barriers that had to be overcome to increase the use of renewable energy in the market:

- **Technical barriers.** Many renewable energy technologies were still at an early stage of development. The Agency stated that renewable energy needed to build a substantial track record in order to convince consumers of its cost effectiveness and reliability.

- **Economic barriers.** Renewable energy generally could not compete with conventional fuels strictly on cost, except in niche markets. This was partly because the prices of energy products did not include the full costs of external factors such as environmental impacts.

- **Institutional barriers.** Key market players — policy makers, financial institutions, suppliers of utility equipment and consumers — were not aware of how far renewable energy technologies had developed.

3.75 We found similar issues. An adequate rate of return on investment was the factor most frequently mentioned by our survey respondents in assessing the potential of an investment project. As the Agency pointed out, many renewable energy projects do not yet provide an adequate rate of return to make them a desirable investment, for several reasons:

- markets are difficult to enter;

- renewable energy products generally cost more than non-renewable ones; and

- payback periods are often longer.

3.76 Provincial utility companies control the production of most electricity in Canada. They have little incentive to purchase or produce more costly "green power" (electricity generated with minimal environmental impact from renewable sources other than large-scale hydro-electric projects) when they can produce power more cheaply from existing sources. This means that independent "green power" producers have difficulty selling their product to the utility companies.

3.77 Furthermore, because the provinces have had highly regulated electricity markets, these independent producers generally have restricted access to the electrical grid, which also limits their ability to market their products. Some provinces are moving to deregulate their electricity markets and make them more open to competition.

3.78 The costs of many forms of "green power" have declined significantly in the last decade. However, they are still generally higher than the costs of generating power from existing and more traditional sources such as large-scale hydro-electric projects and fossil-fuel plants, except in niche markets. More research and development is likely to reduce the costs even further. Gaining access to larger markets would also help bring down costs as each unit is usually cheaper when goods are produced in larger quantities.

The cost and ultimate market price of individual energy products do not include the environmental effects of producing and using them.

3.79 Proponents of renewable energy argue that the cost and ultimate market price of individual energy products do not include the environmental effects of producing and using them. So far, there is no general agreement on the value to be attached to these effects, known as externalities, particularly when broad geographic areas are involved. Therefore, a strategic role exists for governments to help markets take into account all of the benefits and effects of producing and consuming energy. If it were possible to include the value of the externalities in the price of individual energy products, the cost of fuels that create more environmental damage would be higher.

3.80 Investors told us that they generally look for the shortest possible time for their investment to be repaid (the payback period), given the risks of the investment and potential returns. The payback periods for renewable energy and energy efficiency investments are often too long to consider them desirable; thus, financing is hard to find. In the past, governments have in some cases provided a combination of direct support, regulations and tax incentives to help overcome such barriers.

3.81 Investors confirmed that the tax system can play a role in influencing their investment decisions. Tax incentives can sometimes improve the rate of return or reduce the payback period on an investment to make it more appealing. Tax incentives like accelerated write-offs are useful when a company has sufficient profits to claim the write-offs immediately. In other situations, tax incentives like refundable tax credits and flow-through shares are more valuable.

Conclusion

3.82 With the exception of large-scale hydro-electric projects, energy from renewable sources currently makes up a small portion of Canada's energy mix. Producers of renewable energy report that they face several barriers to financing and marketing their products. Some stakeholders have suggested that hidden tax subsidies for investments in energy from non-renewable sources are one important reason why this is happening.

The federal government may wish to consider developing new strategies and approaches to accomplish its stated objectives for investments in renewable energy and energy efficiency.

3.83 We found that governments have intervened in energy markets in the past through direct spending, regulations and tax incentives. Sometimes this was to encourage investments in certain forms of energy and at other times it was to achieve specific policy objectives. Most of the federal spending and tax incentives have been for non-renewable resources, the predominant source of energy in Canada.

3.84 Overall, we found that with a few exceptions, federal government support today for energy investments, including support through the tax system, does not particularly favour the non-renewable sector over the renewable sector. The exceptions are investments in oil sands and coal mines, which receive a significant tax concession; nuclear technology investments, which receive substantial direct support; investments in alternative fuels, which receive more favourable excise tax treatment; and provincially owned energy companies, which pay no federal income tax. We also found that the income tax system does not give any preferential treatment to certain energy efficiency investments.

3.85 All forms of energy are competing for investment dollars against many other investment opportunities, such as high technology. Investments with higher rates of return, established markets and good track records are the ones that attract investors. Non-renewable energy investments often have these features. However, most investors we surveyed find that many renewable energy investments do not currently have these features. They also revealed that the payback period is often too long for investments in renewable energy and energy efficiency to make them the preferred choice.

3.86 Two important ways to address climate change are using energy more efficiently and establishing a more sustainable mix of energy sources, which means a greater reliance on renewable sources. The federal government stated in its 1996 Renewable Energy Strategy that it wants to increase investments in renewable energy. It has also said for many years that it wants Canadians to use energy more efficiently, and the Office of Energy Efficiency is currently promoting this goal.

3.87 Given the barriers we have identified, the federal government may wish to consider developing new strategies and approaches to accomplish its stated objectives for investments in renewable energy and energy efficiency. It will also need to work in close co-operation with other levels of government because in Canada jurisdiction over energy policy is shared.

Natural Resources Canada's comments: *The chapter's historical record of federal energy expenditures and revenues offers the public considerable insight into how federal fiscal policies may have influenced the evolution and growth of the Canadian energy sector over the eventful period covered in the analysis.*

As the report acknowledges, jurisdiction over energy policy is shared between the federal and provincial governments. Both levels of government have a responsibility to foster an attractive investment climate. One important objective of current policy is to use energy more efficiently and to increase market acceptance of renewable energy. Natural Resources Canada is committed to reducing greenhouse gas emissions resulting from energy production and consumption and is working closely with the provinces and stakeholders to address the issue of climate change.

***Department of Finance's comments:** In reference to paragraph 3.48, the Department acknowledges the importance of monitoring the resource allowance to ensure that it is an appropriate compensation for the non-deductibility of provincial royalty payments. An extensive review of the resource allowance was undertaken in 1995–96 and, as a result of this review, a number of changes were proposed in the March 6, 1996 budget. The Department continues to monitor the effectiveness of the resource allowance and other resource tax provisions.*

In reference to paragraph 3.54, the Department is continuing to improve its estimates of tax expenditures related to accelerated write-offs for both renewable and non-renewable projects including oil sands investments.

About the Study

Objectives

The objectives of our study were to give Parliament comprehensive information on the support provided by the federal government for energy investments and to determine whether this support favours the non-renewable energy sector. We were particularly interested in support through the tax system because it is less transparent than direct support. While our focus was on energy investments, we reviewed other significant federal government interventions in the energy sector. We also wanted to explore reasons why energy from renewable sources, other than large-scale hydro-electric projects, makes up a small portion of Canada's energy mix. We sought to determine whether tax incentives are a major contributor to this situation.

Scope and Approach

We focussed mainly on Natural Resources Canada (NRCan), the Department of Finance and the Canada Customs and Revenue Agency (the successor to Revenue Canada). We also obtained information about other federal organizations that dealt with or had an impact on energy matters, such as Atomic Energy of Canada Limited, the Atomic Energy Control Board, the Cape Breton Development Corporation and the National Energy Board.

We reviewed direct federal spending and regulatory regimes as well as federal revenues collected from the energy sector between 1970–71 and 1998–99 to provide historical information and analyze trends. Due to some data limitations, we looked at corporate income tax revenue only for the calendar years 1990 to 1997.

We analyzed the financial information contained in the Public Accounts of Canada and departmental reports on plans and priorities (formerly a portion of Part III of the Main Estimates) and obtained more information from NRCan, the Department of Finance and Statistics Canada. We included payments to third parties and government programs that relate to investments in energy. We excluded general operating expenses of departments and regulatory expenses of agencies concerned with energy matters. We also excluded federal spending on energy to power, heat and cool facilities or run vehicles and other equipment. For regulatory matters, we reviewed documentation on historical developments and information from federal organizations.

We examined past and current means by which the federal government has used the tax system to encourage exploration for and development of various sources of energy. We reviewed and analyzed how the system treats marginal investments, that is investments that just meet the investor's acceptable rate of return.

We conducted a telephone survey of 45 investors to explore reasons why energy from renewable sources, other than large-scale hydro-electric projects, makes up a small portion of Canada's energy mix and to determine whether tax incentives are a major contributor to this situation. These investors, comprising a broad cross-section of individuals and small, medium-sized and large companies, explained the factors they consider in making their decisions on energy investments.

Study Team

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Appendix A

Highlights of Federal Government Spending and Regulation Related to Energy Investments

Oil

1. During the 1950s and 1960s, oil was plentiful and controlled by a handful of large multinational companies. It was relatively cheap and prices remained stable on international markets. The supply of oil from western Canada developed quickly but vast distances separated it from consumers in the east and a pipeline was considered the only practical solution to reach them. However, importing oil by tanker to eastern Canada was much cheaper than transporting it by pipeline from the west.

2. In 1959, the National Energy Board (NEB) was created to monitor and report on all federal matters of energy as well as regulate pipelines, energy imports and exports and utility rates and tariffs.

3. The National Oil Policy, introduced in 1961, established a protected market for Canadian crude oil producers at prices that were linked to international prices. Consumers west of the Ottawa Valley bought domestically produced oil; those east of it bought imported oil.

4. The days of the National Oil Policy ended in September 1973 when the federal government announced the extension of the interprovincial oil pipeline to Montreal (completed in 1976), froze prices of domestic crude and certain oil products, and sought to control export prices. The federal government announced this change in policy so that supply problems in the United States would not automatically raise prices for Canadian consumers.

5. Later that year, the first price shock of the Organization of the Petroleum Exporting Countries (OPEC) overtook this new policy. After the price shock, the federal government formally broke the link between domestic prices and international prices. The objective of "made-in-Canada" prices for crude oil was to protect Canadians across the country from the whims of the world oil market and to provide producers with enough incentives to develop new energy resources.

6. In 1974, Canada inaugurated its first system for pricing oil, with three objectives:

   - to regulate prices of domestic crude oil through federal-provincial agreements;
   - to subsidize imported oil so that consumers in eastern Canada would enjoy lower prices;
   - to control prices and quantities of crude oil and products in the export market.

   Synthetic crude oil (upgraded petroleum from oil sands) was exempted from this policy and sold at the world price. The federal government levied a tax on all oil refined in Canada to pay for the difference between the prices of synthetic and conventional crude oil.

7. Oil import compensation payments were introduced in January 1974 so that consumers in Quebec and Atlantic Canada, who were then completely dependent on imported oil, would also be protected against increases in world oil prices. The payments had totalled about $13.6 billion by the time they ended in 1985. The federal government also controlled the export prices of crude oil through the oil export tax set by the National Energy Board. The oil was sold at the world price but producers received the domestic price; the difference was the oil export tax. The tax helped to finance the oil import compensation payments and raised some $7.8 billion by 1985.

8. In October 1980, the federal government introduced the National Energy Program (NEP), which included several new energy taxes and a broad range of policy initiatives. The NEP retained the objective of a single "made-in-Canada" oil price set below world levels, except for the production of synthetic oil. It also imposed a refinery levy, the petroleum compensation charge, to help achieve this objective. By the end of the regime following the signing of the Western Accord in 1985, the petroleum compensation charge raised about $11.3 billion from refiners, of which $11.1 billion was paid out to the first users (usually other refiners) of high-cost petroleum.

9. The NEP also made changes to the incentive system for exploration. The incentives had been provided mainly through the tax system (see Appendix B). Under the NEP, the government encouraged exploration and sought to increase Canadian ownership in the oil and gas industry by paying some $7.7 billion in cash grants under the Petroleum Incentives Program (PIP). The NEP also introduced the petroleum and gas revenue tax (PGRT), which raised about $10.1 billion.

10. The NEP was phased out following the 1985 Western Accord, which deregulated domestic oil prices. The accord abolished import subsidies, the export tax on crude and oil products, and the petroleum compensation charge. It also phased out PIP grants and the PGRT. In addition, controls were lifted on oil exports.

11. The late 1980s and early 1990s saw the creation and development of several energy megaprojects, including the Hibernia Development Project, the Bi-Provincial Upgrader near Lloydminster and the NewGrade Upgrader in Regina. We examined these megaprojects and presented our findings in the Auditor General's 1992 Report, Chapter 14, Department of Energy, Mines and Resources – Energy Megaprojects.

12. Today, Canada continues to have a deregulated market that uses the world oil price. In addition, the North American Free Trade Agreement includes certain provisions to encourage trade in energy and basic petrochemical goods. Companies are actively exploiting oil deposits off the east coast and oil sands in central and northern Alberta, where they have announced several new projects amounting to almost $20 billion.

Natural gas

13. Natural gas usually travels by pipeline from the field to the final user. This situation has led to a regulated downstream market, although some deregulation is now taking place. It also means that Canadians have easy access only to North American supplies rather than those from all over the world, as is the case with crude oil.

14. At the start of the 1950s, domestic markets for natural gas were limited and most producers concentrated on finding and developing new reserves of crude oil that were easier to market. In 1953, the government declared that an all-Canadian pipeline route was needed to get natural gas from western producers to eastern consumers. A few years later, it approved the TransCanada PipeLines Limited (TCPL) project. However, since natural gas was scarce in eastern Canada and manufactured gas was expensive, a market had to be developed. The federal government permitted imports of gas from the United States to eastern Canada starting in 1956. These gradually ended once the TCPL pipeline reached the southern Ontario market in 1958.

15. Another challenge faced the gas industry. Potential buyers of the product, provincially regulated utilities, had no strong connections to either the producers or the pipeline. For the pipeline to be profitable, TCPL required long-term contracts with gas utilities and producers. Its financial problems and the measures the federal government took to assist the company eventually led to the "great pipeline debate" of 1956–57.

16. In the 1960s, Canadian consumption of natural gas grew quickly, as did exports to the United States. In 1971, the NEB declared that Canada did not have enough gas to meet its future domestic needs; the NEB rejected all applications for additional exports. At the same time, governments began to take a more active interest in natural

gas prices, believing them to be too low in relation to competing fuels. World oil prices rapidly increased following the first OPEC price shock in the fall of 1973. The federal government soon replaced pricing guidelines with regulation, particularly for export prices. Domestically, it had jurisdiction over natural gas prices in interprovincial trade, but the producing provinces were raising prices of gas sold beyond their borders. In its budget of June 1975, the federal government announced its agreement with Alberta to set the price of natural gas delivered to Toronto.

17. In 1979, the second OPEC price shock foreshadowed rising costs for imported oil. In the next years, as the surplus of domestic natural gas grew, the National Energy Program (NEP) encouraged Canadian consumers to use gas rather than oil by establishing a single wholesale price for all gas consumed in eastern Canada. It also applied a tax on domestic natural gas and gas liquids. In May 1981, wholesale prices of natural gas and oil were subjected to another federal levy, the Canadian ownership special charge, which was introduced to finance some of the NEP projects that promoted Canadian public ownership of energy investments in Canada.

18. Domestic and export sales of natural gas dropped during the 1981–82 recession. Meanwhile, higher prices to producers stimulated drilling activity. The combination of these two factors resulted in a growing surplus of natural gas. Governments responded to the situation by relaxing controls over prices and exports. When the Western Accord was signed in 1985, the federal government and the governments of the gas-producing provinces committed themselves to establishing a more flexible system of pricing natural gas in the domestic market. By November 1986, governments had stopped regulating field prices of natural gas and let buyers and sellers negotiate them. Gas prices to final users remained provincially regulated for the most part.

19. Today, the NEB continues to regulate interprovincial and international pipelines and export sales but with increasing flexibility, particularly since the signing of the North American Free Trade Agreement.

Coal

20. Canada's coal reserves are distributed widely across the country. There are two main uses for coal. Thermal coal (or steam coal) is used mainly to generate electricity. Metallurgical coal (or coking coal) is used for the production of coke, which is a reducing agent and heat source in steelmaking. In 1998, companies exported about half of Canada's coal production, with metallurgical coal forming over 80 percent of these exports.

21. Coal has been and remains an important part of Canada's energy sector. In the early decades of the 1900s, coal was the main source of primary energy in Canada. By the middle of the century, it began to yield to its successors — oil and natural gas. A gradual upturn in coal use occurred in the 1970s, when oil price shocks improved coal's competitive position for producing electricity. In 1998, 19 percent of Canada's electricity was generated using coal.

22. Burning coal produces more carbon dioxide per unit of energy generated than other fossil fuels, such as oil and natural gas. Natural Resources Canada's Energy Technology Centre, part of the Canadian Centre for Mineral and Energy Technology (CANMET), works with private and other public sector partners to help the coal industry develop cleaner, more energy-efficient combustion processes.

23. The Cape Breton Development Corporation (DEVCO), a federal Crown corporation, is among the producers of coal. Since the inception of DEVCO in 1967, the federal government has provided funding of about $1.6 billion to DEVCO's coal division. In early 1999, it announced that DEVCO would be privatized by the end of 2000.

Nuclear technology

24. The development of nuclear technology in Canada began in the 1940s. In 1944, the federal government started constructing a research facility at Chalk River, Ontario. It also took control of Canada's only uranium mining company at the time and ran it as a Crown corporation, Eldorado Mining and Refining Limited (later Eldorado Nuclear Limited and now Canada Eldor Inc.).

25. In 1946, the Atomic Energy Control Board (AECB) was established under the *Atomic Energy Control Act* to control and supervise the development, application and use of nuclear (atomic) energy. The Act also authorized the AECB to regulate the Canadian nuclear industry. When the Act was passed, the AECB took over the administration, but not the operation, of research at the Chalk River facility. The National Research Council operated the facility under an arrangement with the AECB until 1952 when Atomic Energy of Canada Limited (AECL), a Crown corporation, took it over. The research facility remained under the administrative control of the AECB until 1954 following amendments to the Act.

26. Since 1946, the federal government has spent about $6 billion on nuclear technology, mostly through AECL. Exhibit 3.3 of the chapter shows the trend in this spending since 1970–71.

27. A large portion of this amount paid for research and development, including the design and development of the CANDU (Canadian deuterium uranium) nuclear power reactor and its predecessors, as well as the storage of radioactive waste. Some of the federal money financed research in other nuclear applications not related to energy, such as radioisotopes in medicine.

Renewable energy

28. Renewable resources have historically provided us with energy. We have used wood for heating and cooking; water and wind have helped to produce mechanical power. The federal government has supported the development and use of renewable energy technologies for over 20 years. At first, it wanted to be certain that Canada had a secure supply of energy. Now it is more concerned about the environmental impacts of using non-renewable resources to produce energy, and it has taken several steps in recent years to encourage investments in renewable energy.

29. Beginning in 1998, the federal government provided $20 million annually for three years to promote investments in renewable energy and energy efficiency. This provision included an allocation of $12 million over the three years for the Renewable Energy Deployment Initiative to stimulate demand for renewable energy systems that heat and cool space and water in the private sector and in federal facilities. Also starting in 1998, the government provided $50 million a year over three years for climate change initiatives to build momentum toward concrete action and results for investments in renewable energy and energy efficiency. The February 2000 Budget announced that this support will be extended for another three years at $70 million each year.

30. Natural Resources Canada (NRCan) has also supported the development and use of renewable energy technologies in several ways:

    - The Energy Diversification Research Laboratory at CANMET develops and promotes the use of innovative technologies in renewable energy and energy efficiency.
    - The CANMET Energy Technology Centre works with private and other public sector partners to develop and use clean, energy-efficient technologies for buildings, industry, transportation and power production. It includes a program for renewable energy technologies that began after the 1973 oil crisis. The program supports the Canadian industry's efforts to develop and use renewable energy technologies that are cost-effective and environmentally responsible, namely small-scale hydro-electric projects, active solar energy, wind energy and bioenergy (energy produced from plant materials and animal waste).

- NRCan administers the interdepartmental Program of Energy Research and Development (PERD), which promotes research and development of renewable energy and energy efficiency.

Energy efficiency

31. The federal government, particularly NRCan, has promoted energy conservation and energy efficiency for many years. The rationale, focus and approach of these efforts have varied.

32. In the mid- to late 1970s, in response to the oil crises of 1973 and 1979, the federal government focussed its efforts on energy conservation. It promoted changes to behaviour and lifestyle to reduce the consumption of energy. For example, people were encouraged to turn down their thermostats and to turn off unnecessary lighting.

33. In the late 1970s and early 1980s, federal government spending on energy efficiency programs grew significantly, as shown in Exhibit 3.3 of the chapter. It used grant programs, such as the Canadian Home Insulation Program (CHIP), to convince energy users to become more energy-efficient.

34. By the mid-1980s, with energy prices declining and energy supplies increasing, the federal government redirected its focus to promoting energy efficiency through research and development, market-based research, demonstration projects and activities to provide information.

35. By the late 1980s, there was a growing concern worldwide about the burning of fossil fuels, the associated greenhouse gas emissions and their impact on global climate change. Because of this and other environmental concerns, the federal government began in the early 1990s to re-emphasize improving energy efficiency. It has promoted a wiser use of energy without sacrificing its benefits or requiring major changes in lifestyle. For example, people are encouraged to buy more energy-efficient furnaces and to buy light bulbs that produce about the same light with less energy. We examined NRCan's energy efficiency initiatives and presented our findings in the Auditor General's April 1997 Report, Chapter 10, Natural Resources Canada – Energy Efficiency.

36. The *Energy Efficiency Act* came into effect on 1 January 1993. The Act enables NRCan to make and enforce regulations on the energy efficiency of products that use energy and to promote energy efficiency and energy from alternative sources. NRCan now regulates minimum levels of energy performance for more than 20 products that use energy. These products, such as stoves and refrigerators, account for 65 percent of overall use of energy in homes.

37. One of the federal government's objectives in promoting improvements in energy efficiency was to help stabilize greenhouse gas emissions at 1990 levels by the year 2000, commonly referred to as Canada's stabilization goal. Promoting greater energy efficiency in all sectors of the economy was a key element of Canada's 1995 National Action Program on Climate Change. Under the Program, federal, provincial and territorial ministers of energy and the environment agreed to work together to achieve Canada's stabilization goal. We examined results of this effort and presented our findings in our May 1998 Report, Chapter 3, Responding to Climate Change – Time to Rethink Canada's Implementation Strategy.

38. In April 1998, NRCan established the Office of Energy Efficiency (OEE). The OEE originated out of Canada's commitment to reduce emissions of certain greenhouse gases to six percent below 1990 levels by 2008–2012. Canada made this commitment when it agreed to the Kyoto Protocol in December 1997.

Appendix B

Highlights of Government Support for Energy Investments Through the Tax System

1. During the 1950s and 1960s, the oil and gas industry enjoyed stable, favourable treatment by the federal tax system. Capital expenses were classified either as intangible, such as the costs of geological work and drilling for exploration and development, or as tangible, such as the purchase of equipment and buildings. For tax purposes, companies could write off intangible expenses in the year they were incurred. They could write off tangible expenses over several years using the capital cost allowance rules in the *Income Tax Act*. They could also fully deduct the royalties paid to the provinces for the use of energy resources in calculating their federal income taxes.

2. One of the most important provisions affecting the industry was percentage depletion. For the operator of an oil and gas well, percentage depletion was equal to 33 1/3 percent of the oil and gas production profits from the well; for other companies that had an interest in the well, it was 25 percent. This tax deduction, designed to encourage exploration, was in addition to the actual expenses that companies incurred and could be claimed even if they had not spent any money on exploration and development. In effect, the deduction meant that companies paid taxes at a reduced rate.

3. In 1974, the federal government made several changes to the tax system:

   - It divided exploration and development expenses into two groups. Exploration expenses (money spent looking for new resources) could still be written off for tax purposes in the year they were incurred. Development expenses (money spent bringing known resources into production) were added to a pool and the maximum amount companies could write off each year was 30 percent of the balance in the pool.

   - Companies could no longer deduct provincial royalty payments when calculating federal corporate income taxes. Instead, the government imposed a lower tax rate, which was replaced in 1976 with a deductible resource allowance (explained in Appendix C).

   - The concept of earned depletion replaced percentage depletion. Depletion was no longer an automatic deduction; companies had to spend money on exploration and development to "earn" a deduction.

4. In 1977, the federal government introduced "superdepletion", a larger deduction that would apply for three years. In addition to the regular deduction for earned depletion, companies would "earn" an additional depletion allowance of 66 2/3 percent for exploration expenses above $5 million per well. This allowance applied only to very expensive wells, such as those drilled in the Beaufort Sea. The combination of depletion and superdepletion resulted in a 200 percent write-off for tax purposes for eligible expenses above $5 million per well. For example, if a company spent $6 million to drill one well, it could deduct about $8.7 million when calculating its federal income taxes (that is, the $6 million actually spent, $2 million in earned depletion and about $0.7 million in superdepletion).

5. The National Energy Program in 1980 brought other changes to the tax regime for energy:

   - It imposed the petroleum and gas revenue tax (PGRT) to fund the new Petroleum Incentives Program (PIP) and to stop the erosion of the federal tax base resulting from the generous incentives for exploration.

   - A system of cash payments under the new PIP replaced earned depletion as an incentive to explore for oil and gas, particularly by Canadians. These grants varied between exploration and development and among regions, and were higher for firms with higher degrees of Canadian ownership. However, earned depletion was retained for the costs of enhanced oil recovery equipment and oil sands equipment.

The federal government phased out PIP grants and the PGRT after the Western Accord was signed in 1985. In 1987, tax reform lowered most corporate income tax rates but changed a number of deductions and allowances to broaden the income base on which taxes were calculated.

6. Less dramatic changes followed in the early 1990s and more attention was paid to renewable energy and energy efficiency. In 1992, the government eliminated the excise tax on ethanol and methanol in blended fuels, mainly gasoline. In 1994, it reduced the accelerated write-offs for tax purposes for renewable energy equipment that produces electricity and heat but expanded the range of energy equipment eligible for the revised write-offs.

7. In 1996, the federal government made some major changes for non-renewable energy investments:

   - It clarified and tightened the income tax rules for calculating the resource allowance and changed the rules for flow-through shares to restrict them to more risky expenses.
   - The rules for joint exploration corporations, which had been in place since 1962, were terminated. The rules were designed to help companies pool their resources to explore for and develop oil and gas and minerals, but the government determined that they were being used mainly to reduce taxes on the sale of resource properties.
   - The rules for accelerated write-offs for new mines and major mine expansions, including oil sands, were expanded to allow more costs to qualify for the accelerated write-offs.
   - Tangible capital expenses for oil sands *in situ* projects (those that use drilling techniques) could be written off in the same way as expenses for oil sands projects that employ surface mining techniques. Before 1996, these expenses were written off using the tax rules for oil and gas. As a result of the change, they could be written off using the more generous tax rules for mining.

8. Also in 1996, the government made changes to encourage investments in renewable energy. It removed some restrictions from the specified energy property rules in order to allow more companies to claim the accelerated write-offs for investments in renewable energy that produces electricity or heat. It introduced the concept of Canadian renewable and conservation expenses, which let companies immediately write off expenses incurred to develop renewable energy projects. Finally, it allowed companies to pass these expenses to shareholders who bought flow-through shares.

9. In 1999, the government announced that it would begin phasing in an extension of the seven percent tax credit for manufacturing and processing to companies that produce, for sale, electrical energy or steam used in generating electricity. This extension will be available to companies that use renewable and non-renewable energy sources. The February 2000 Budget announced that this extension would include all steam produced for sale.

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Appendix C

Current Income and Excise Tax Provisions for Energy Investments

Provisions for capital expenses

1. Companies and individuals pay federal income tax on their business income; provincially owned oil and gas companies and utilities do not. The *Income Tax Act* contains general provisions that apply to all sectors of the economy and special provisions that apply only to specific sectors. Table 1 below summarizes those provisions that concern the energy sector only. The provisions for renewable and non-renewable resources are complex, and when they are used, so is the way they interact with each other, with all the other provisions in the Act and with provincial tax and royalty regimes.

Intangible capital expenses **Table 1**

Intangible capital expenses are incurred to explore for and develop non-renewable resources and to develop renewable resources, for example, expenses to bring a discovered oil well to production or to look for a suitable windy site for future wind turbines.

The oil and gas industry uses two methods to write off intangible capital expenses for book purposes:

- Under the "successful efforts" method, successful exploration and development investments (those that lead to the finding of reserves that produce oil or natural gas) are capitalized and written off over the production life of the found reserves. Unsuccessful exploration and development investments (dry holes) are written off in the year the money is spent.
- Under the "full cost" method, all exploration and development investments, whether successful or not, are capitalized and written off over the production life of the found reserves.

The renewable resource sector normally capitalizes intangible capital expenses for book purposes and writes them off over the production life of the new resource.

For tax purposes, these expenses are put in different pools depending on their nature and are written off according to the rules for each pool. The pools are described below.

Canadian exploration expense (CEE) includes qualifying expenses to determine the existence, location, extent or quality of a non-renewable resource. CEE can be fully written off as soon as the money is spent (with some limitations) or carried forward to future years. It can also be passed to shareholders who have bought flow-through shares. When this happens, the shareholders claim the CEE rather than the company.

Canadian development expense (CDE) includes qualifying drilling expenses to bring known reserves into production. CDE can be written off at a maximum rate of 30 percent of the balance in the pool each year. The balance left in the pool is carried forward to future years. CDE can be flowed through to shareholders. Under certain conditions small companies can reclassify the first $1 million of CDE as CEE to get a faster write-off.

Canadian oil and gas property expense (COGPE) refers to lease and bonus payments to resource owners, typically provinces, for the rights to explore, develop and take the resource. COGPE can be written off at a maximum rate of 10 percent of the balance in the pool each year. The balance left in the pool is carried forward to future years.

Mining provisions for intangible expenditures are similar to those listed above but there are differences that are particularly relevant to oil sands mining and coal. Property expenses are treated as CDE and can be written off at a maximum rate of 30 percent of the balance in the pool each year (compare with COGPE). Pre-production development expenses for new mines are treated as CEE and can be fully written off as soon as the money is spent or carried forward to future years (compare with CDE).

Canadian renewable and conservation expense (CRCE) includes qualifying expenses to develop a renewable energy project for which it is expected that at least 50 percent of the capital cost of the equipment to be used is eligible for class 43.1 treatment (see below). CRCE can be fully written off as soon as the money is spent or carried forward to future years. CRCE can be flowed through to shareholders.

Appendix C

Current Income and Excise Tax Provisions for Energy Investments

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Mining provisions for intangible expenditures are similar to those listed above but there are differences that are particularly relevant to oil sands mining and coal. Property expenses are treated as CDE and can be written off at a maximum rate of 30 percent of the balance in the pool each year (compare with COGPE). Pre-production development expenses for new mines are treated as CEE and can be fully written off as soon as the money is spent or carried forward to future years (compare with CDE).

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Tangible capital expenses

Table 1 (continued)

Tangible capital expenses are the costs of physical assets, such as buildings and equipment.

Tangible capital expenses are generally written off (depreciated) on a company's books over the useful life of the assets. For tax purposes, they are grouped into capital cost allowance (CCA) classes, each with an annual write-off rate that is often different than the book depreciation rate. There are many CCA classes defined in the *Income Tax Act*, of which the following five classes are the most relevant to energy investments.

Class 1 includes pipelines, other than oil and gas pipelines with a useful life of 15 years or less, buildings and structures, including their energy-using components, dams, and electrical generating equipment. The CCA rate is four percent (the February 2000 Budget proposes an increase to eight percent for qualifying energy equipment) on a declining balance basis. (This means that the costs are pooled: four percent of the balance in the pool is written off as an expense for the year and deducted from the pool, and the remaining balance in the pool is carried forward to the next year.)

Class 8 includes oil and gas pipelines with a useful life of 15 years or less and electrical generating equipment that has a maximum load of 15 kilowatts. The CCA rate is 20 percent on a declining balance basis.

Class 41 includes all resource extraction assets acquired after 1987. It also includes electrical generating equipment for mines, equipment used in resource exploration and heavy crude oil processing, natural gas processing plants and drilling vessels for oil and gas. The CCA rate is 25 percent on a declining balance basis. There is also a special CCA rate of 100 percent for new mine and mine expansion assets, as defined in the Act, but it is limited to the amount of income earned from the mine. In these cases, no corporate income tax is paid on the income from the mine until all capital expenses are written off.

Class 43 includes energy conservation equipment and heat recovery equipment used in manufacturing and processing plants, equipment used in refineries, natural gas straddle plants, and facilities to produce alternative transportation fuels, such as ethanol. The CCA rate is 30 percent on a declining balance basis.

Class 43.1 covers energy conservation equipment, or investments in renewable energy that produce electricity and heat (with some restrictions). It includes mainly co-generation and specified waste-fuelled electrical generation systems, active solar and passive solar systems, small-scale hydro-electric installations, heat recovery systems, wind energy conversion systems, photovoltaic electrical generation systems, geothermal electrical generation systems, specified waste-fuelled heat production equipment, and electrical generating equipment using solution gas. The CCA rate is 30 percent on a declining balance basis.

Provincial royalties and the federal resource allowance

2. The provinces own much of Canada's non-renewable energy resources. They charge royalties for taking these resources. They also charge mineral taxes on freehold mineral rights. Table 2 summarizes some of the royalty regimes that exist today.

Highlights of provincial royalty regimes

Table 2

Alberta. The royalty rate on conventional oil and gas production varies with the vintage (the date the oil or gas was discovered), the productivity of the well and the price. There are minimum and maximum royalties. For example, the minimum royalty for natural gas from a normal to high-producing well is 15 percent of the volume produced; the maximum royalty is 35 percent for old gas and 30 percent for new gas. Alberta also provides a refundable royalty tax credit equal to between 25 percent and 75 percent of the first $2 million in Crown royalties paid. As well, Alberta offers reduced royalties or short-term royalty holidays to encourage certain activities, such as drilling gas wells deeper than 2,500 metres.

In the past, Alberta negotiated royalty agreements for oil sands projects with each developer. Its current royalty regime charges a minimum royalty of one percent of project gross revenue. After payout, the royalty is the greater of the minimum royalty or 25 percent of project net revenue. Payout occurs at the point in time when cumulative revenues from the project equal cumulative operating and capital costs plus a return to the developer. There are transitional agreements for developers moving from negotiated agreements to the current royalty regime.

British Columbia. The royalty rate on conventional oil production varies with the vintage and productivity of the well. Rates are lower for new oil. The royalty rate for natural gas varies with the price and the type of gas but not the vintage or productivity of the well. A 36-month royalty holiday is given to oil produced from a new pool discovery well completed after 30 June 1974.

Table 2 (continued)

Newfoundland. Newfoundland has separate royalty regimes for onshore and offshore resources. There is currently no onshore production of oil and gas. For the offshore, the royalty rate varies with the amount of oil produced and the level of profit earned. For example, before payout the royalty rate ranges from one percent to 7.5 percent of gross revenue.

The Hibernia Development Project has a separate royalty regime. It includes a fixed royalty of $0.01 per barrel and a variable royalty. Before payout the variable royalty rate gradually increases from one percent to five percent of gross revenue over six years. After payout the variable royalty is the greater of five percent of gross revenue or 30 percent of net revenue (as defined in the agreement). If the project is very profitable, a supplementary royalty also applies.

The Terra Nova Development Project also has a separate royalty regime. It includes a fixed royalty of $0.01 per barrel and a variable royalty. Before payout the variable royalty gradually increases from one percent to 10 percent of gross revenue. After payout the variable royalty is similar to Hibernia's.

Nova Scotia. On 4 August 1998, Nova Scotia announced a new royalty regime for future offshore projects. The royalty varies with project revenues and project profits starting at two percent of gross revenue. A minimum of five percent of gross revenue is always payable after payout. There is no royalty holiday.

The Sable Island project will pay a reduced royalty of one percent of gross revenue for the first three years. After that, the royalty rate increases to two percent of gross revenue. Depending on the profitability of the project, it continues to rise to a maximum of 35 percent of net revenue.

Saskatchewan. The royalty rates on conventional oil and gas production vary with the vintage and productivity of the well, and the price. The rates start at zero for low-producing wells and increase progressively for higher-producing wells. For example, a new vertically drilled heavy oil development well producing 100 cubic metres of oil per month will pay a minimum royalty rate of 7.5 percent if the price is $100 per thousand cubic metres or less and a maximum royalty rate of 22.5 percent. Saskatchewan also provides royalty incentives to encourage new projects.

3. In 1997, the Minister of Finance's Technical Committee on Business Taxation reported that the overall effective royalty rate was between 16 percent and 17 percent of gross revenues for conventional oil and gas; this rate takes into account royalty incentives. As Table 2 shows, the royalty regime for oil sands and offshore projects is initially more generous than that for conventional oil and gas; royalties are around one percent of revenues until cumulative operating and capital project costs and a return on investment are covered.

4. When companies calculate their federal income taxes, they cannot deduct royalties paid to provincial governments for oil, natural gas and minerals. (Normal income tax rules allow a deduction for most amounts that are paid to earn income.) To compensate for this restriction, companies can deduct a resource allowance that is 25 percent of resource profits from mining and producing oil and gas. In general terms, resource profits are defined as resource revenue minus associated overhead, operating costs and capital cost allowances.

Investment tax credits

5. There are two general investment tax credits in the federal tax system that are of particular importance to the energy sector. The Atlantic Investment Tax Credit aims to develop the economy of the Atlantic provinces by granting a 10 percent tax credit on investments in manufacturing and energy production. Offshore oil and gas companies currently receive a large share of the total amount claimed for this credit.

6. The other tax credit is designed to support investments by Canadian industry in scientific research and experimental development. Companies can reduce the taxes they have to pay by claiming a credit equal to 20 percent of the cost of eligible research and development. Smaller Canadian-controlled companies can claim 35 percent, and a portion of this amount is refundable if the claimant does not have any taxes to pay. Many companies in the renewable and non-renewable resource sectors carry out extensive research and development and can use this investment tax credit.

Tangible capital expenses **Table 1 (continued)**

Tangible capital expenses are the costs of physical assets, such as buildings and equipment.

Tangible capital expenses are generally written off (depreciated) on a company's books over the useful life of the assets. For tax purposes, they are grouped into capital cost allowance (CCA) classes, each with an annual write-off rate that is often different than the book depreciation rate. There are many CCA classes defined in the *Income Tax Act*, of which the following five classes are the most relevant to energy investments.

Class 1 includes pipelines, other than oil and gas pipelines with a useful life of 15 years or less, buildings and structures, including their energy-using components, dams, and electrical generating equipment. The CCA rate is four percent (the February 2000 Budget proposes an increase to eight percent for qualifying energy equipment) on a declining balance basis. (This means that the costs are pooled: four percent of the balance in the pool is written off as an expense for the year and deducted from the pool, and the remaining balance in the pool is carried forward to the next year.)

Class 8 includes oil and gas pipelines with a useful life of 15 years or less and electrical generating equipment that has a maximum load of 15 kilowatts. The CCA rate is 20 percent on a declining balance basis.

Class 41 includes all resource extraction assets acquired after 1987. It also includes electrical generating equipment for mines, equipment used in resource exploration and heavy crude oil processing, natural gas processing plants and drilling vessels for oil and gas. The CCA rate is 25 percent on a declining balance basis. There is also a special CCA rate of 100 percent for new mine and mine expansion assets, as defined in the Act, but it is limited to the amount of income earned from the mine. In these cases, no corporate income tax is paid on the income from the mine until all capital expenses are written off.

Class 43 includes energy conservation equipment and heat recovery equipment used in manufacturing and processing plants, equipment used in refineries, natural gas straddle plants, and facilities to produce alternative transportation fuels, such as ethanol. The CCA rate is 30 percent on a declining balance basis.

Class 43.1 covers energy conservation equipment, or investments in renewable energy that produce electricity and heat (with some restrictions). It includes mainly co-generation and specified waste-fuelled electrical generation systems, active solar and passive solar systems, small-scale hydro-electric installations, heat recovery systems, wind energy conversion systems, photovoltaic electrical generation systems, geothermal electrical generation systems, specified waste-fuelled heat production equipment, and electrical generating equipment using solution gas. The CCA rate is 30 percent on a declining balance basis.

Provincial royalties and the federal resource allowance

2. The provinces own much of Canada's non-renewable energy resources. They charge royalties for taking these resources. They also charge mineral taxes on freehold mineral rights. Table 2 summarizes some of the royalty regimes that exist today.

Highlights of provincial royalty regimes **Table 2**

Alberta. The royalty rate on conventional oil and gas production varies with the vintage (the date the oil or gas was discovered), the productivity of the well and the price. There are minimum and maximum royalties. For example, the minimum royalty for natural gas from a normal to high-producing well is 15 percent of the volume produced; the maximum royalty is 35 percent for old gas and 30 percent for new gas. Alberta also provides a refundable royalty tax credit equal to between 25 percent and 75 percent of the first $2 million in Crown royalties paid. As well, Alberta offers reduced royalties or short-term royalty holidays to encourage certain activities, such as drilling gas wells deeper than 2,500 metres.

In the past, Alberta negotiated royalty agreements for oil sands projects with each developer. Its current royalty regime charges a minimum royalty of one percent of project gross revenue. After payout, the royalty is the greater of the minimum royalty or 25 percent of project net revenue. Payout occurs at the point in time when cumulative revenues from the project equal cumulative operating and capital costs plus a return to the developer. There are transitional agreements for developers moving from negotiated agreements to the current royalty regime.

British Columbia. The royalty rate on conventional oil production varies with the vintage and productivity of the well. Rates are lower for new oil. The royalty rate for natural gas varies with the price and the type of gas but not the vintage or productivity of the well. A 36-month royalty holiday is given to oil produced from a new pool discovery well completed after 30 June 1974.

Table 2 (continued)

Newfoundland. Newfoundland has separate royalty regimes for onshore and offshore resources. There is currently no onshore production of oil and gas. For the offshore, the royalty rate varies with the amount of oil produced and the level of profit earned. For example, before payout the royalty rate ranges from one percent to 7.5 percent of gross revenue.

The Hibernia Development Project has a separate royalty regime. It includes a fixed royalty of $0.01 per barrel and a variable royalty. Before payout the variable royalty rate gradually increases from one percent to five percent of gross revenue over six years. After payout the variable royalty is the greater of five percent of gross revenue or 30 percent of net revenue (as defined in the agreement). If the project is very profitable, a supplementary royalty also applies.

The Terra Nova Development Project also has a separate royalty regime. It includes a fixed royalty of $0.01 per barrel and a variable royalty. Before payout the variable royalty gradually increases from one percent to 10 percent of gross revenue. After payout the variable royalty is similar to Hibernia's.

Nova Scotia. On 4 August 1998, Nova Scotia announced a new royalty regime for future offshore projects. The royalty varies with project revenues and project profits starting at two percent of gross revenue. A minimum of five percent of gross revenue is always payable after payout. There is no royalty holiday.

The Sable Island project will pay a reduced royalty of one percent of gross revenue for the first three years. After that, the royalty rate increases to two percent of gross revenue. Depending on the profitability of the project, it continues to rise to a maximum of 35 percent of net revenue.

Saskatchewan. The royalty rates on conventional oil and gas production vary with the vintage and productivity of the well, and the price. The rates start at zero for low-producing wells and increase progressively for higher-producing wells. For example, a new vertically drilled heavy oil development well producing 100 cubic metres of oil per month will pay a minimum royalty rate of 7.5 percent if the price is $100 per thousand cubic metres or less and a maximum royalty rate of 22.5 percent. Saskatchewan also provides royalty incentives to encourage new projects.

3. In 1997, the Minister of Finance's Technical Committee on Business Taxation reported that the overall effective royalty rate was between 16 percent and 17 percent of gross revenues for conventional oil and gas; this rate takes into account royalty incentives. As Table 2 shows, the royalty regime for oil sands and offshore projects is initially more generous than that for conventional oil and gas; royalties are around one percent of revenues until cumulative operating and capital project costs and a return on investment are covered.

4. When companies calculate their federal income taxes, they cannot deduct royalties paid to provincial governments for oil, natural gas and minerals. (Normal income tax rules allow a deduction for most amounts that are paid to earn income.) To compensate for this restriction, companies can deduct a resource allowance that is 25 percent of resource profits from mining and producing oil and gas. In general terms, resource profits are defined as resource revenue minus associated overhead, operating costs and capital cost allowances.

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Oil sands, a special case

7. Central and northern Alberta have large deposits of tar-like bitumen, which can be converted into petroleum products. However, the substance is too thick to be extracted by conventional oil production methods. Deposits that are located near the surface can be recovered by surface or open-pit mining techniques. Bitumen deposits buried too deep for mining to be economical are extracted using *in situ* (drilling) methods more similar to those used for conventional oil and gas.

8. The mining provisions of the *Income Tax Act* are used for oil sands mines, rather than the oil and gas provisions. The mining provisions are similar to those for oil and gas but allow more generous write-offs for property and pre-production development expenses.

9. There are also special provisions for assets used to extract the bitumen. When a company acquires these assets for a new mine or a major expansion of an existing mine, including oil sands mines, it can write them off immediately, as long as the write-off does not exceed the income from the mine. In other words, the company only pays federal income tax on the income from the mine once it has written off all the eligible capital costs. This write-off is a significant tax concession. In the case of a major mine expansion, the income from the mine includes the whole mine, not just the expansion. As a result, the costs of expanding an existing mine will likely be written off more quickly than the costs of opening a new one. After 6 March 1996, oil sands projects that use *in situ* extraction methods can apply the mining provisions to all qualifying tangible capital expenses on the basis that the product is similar, regardless of the extraction method.

10. Oil sands projects are also subject to the resource allowance system described earlier, with one major exception. The Syncrude project received a remission order in 1976 that has allowed the participants to deduct provincial royalties as well as the resource allowance for two of its leases. The order is in effect until the production of 2.1 billion barrels of synthetic crude or 31 December 2003, whichever comes first. According to the Public Accounts of Canada, the government had remitted at least $153 million in taxes under the order by 31 March 1999.

11. The tax system has recognized the risks and huge costs of oil sands projects, particularly in earlier years when the technology was evolving and the operating costs were greater than the selling price of the product. As noted in Table 2, the Province of Alberta charges lower royalty rates during the early years of an oil sands project than it does for conventional oil and gas.

Excise taxes

12. Consumers pay several taxes on fuels to run their vehicles and equipment: federal and provincial excise taxes, the federal goods and services tax and, in some instances, provincial sales taxes. Consumers who purchase more fuel-efficient vehicles benefit from an effective reduction in the total excise taxes that they would have paid. Alternative fuels, such as ethanol produced from renewable sources, propane, compressed natural gas and methanol, are exempted from the federal excise tax. For blended fuels, the tax exemption applies only to the proportion of the exempt fuel in the product.

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CANADA

Report of the
Commissioner of the Environment and Sustainable Development
to the House of Commons

Chapter 4
Smog: Our Health at Risk

2000

This 2000 Report comprises 9 chapters, including "The Commissioner's Observations" and a Foreword. In order to better meet clients' needs, the Report is available in a variety of formats. If you wish to obtain another format or other material, the Table of Contents and the order form are found at the end of this chapter.

© Minister of Public Works and Government Services Canada 2000
Cat. No. FA1–2/2000–4E
ISBN 0–662–28972–2
Copies françaises aussi disponibles

EcoLogo^M Paper / Papier Éco–Logo^M

Chapter 4

Smog

Our Health at Risk

Smog: Our Health at Risk

Reader's Guide

This chapter has three parts:

***Part I** sets out Canada's smog problem as the federal government sees it. Environment Canada, Health Canada, and Transport Canada have reviewed this material for completeness, fairness and accuracy. While we have not independently verified the material, we believe those involved in smog management would generally agree that it shows the problems created by smog and the opportunities that reducing smog presents for Canada.*

***Part II** discusses the roles and responsibilities of those involved in smog management and sets out the national approach to the problem, including the federal tools used to combat smog.*

***Part III** focusses on the federal role in implementing Canada's national smog program — the three phases of the 1990 NOx/VOC Management Plan. We report our audit findings on the federal government's own initiatives and on its broader role of leadership in implementing the Plan nationally.*

*The **Main Points**, which follow this guide, provide a concise summary of the chapter, with cross-references to further details.*

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The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies and practices of the Office of the Auditor General. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants. The numbered paragraphs in bold face represent recommendations.

Smog

Our Health at Risk

Main Points

Smog poses a serious threat to Canadians

4.1 Over the last decade, the federal government has stated repeatedly that Canada's smog problem is a major public health issue and one that poses a serious threat to the environment. Its most significant impact is the adverse effects it has on the health of Canadians, particularly the most vulnerable members of society — the elderly, our children and those with heart disease and lung and other respiratory diseases. Even healthy adults are vulnerable to the adverse effects of smog (paragraphs 4.30–4.47).

4.2 The federal government estimates that air pollution can be linked to 5,000 premature deaths each year in 11 major Canadian cities. This is a relatively large number of deaths when compared with some of the other involuntary risks that Canadians face. In addition, a far larger number of Canadians experience less serious but more widespread impacts that can place a significant burden on our health care system. For example, exposure to smog can result in respiratory or other problems that can interfere with quality of life and physical performance. Other potential effects include increased use of medication, more visits to doctors or emergency rooms and even admissions to hospital (4.30–4.43).

4.3 Smog also affects Canada's agricultural and forestry sectors. Millions of dollars are lost each year in the agricultural sector due to the impact of common air pollutants on crops (4.48–4.52).

4.4 In a 1999 survey conducted for Health Canada, 24 percent of Canadians identified air pollution as their provinces' most serious environmental issue. In addition, 61 percent said they are "very concerned" about air quality problems. While many Canadians are aware that smog is bad for their health and their environment, there is a need to improve their understanding of the problem and what they can do about it (4.107–4.109).

No time for complacency

4.5 While there have been downward trends in some pollutants commonly found in outdoor air, trends now appear to be levelling off or even increasing. Past improvements in air quality are slowly being eroded by increased emissions as a result of greater consumption of energy (4.58–4.67 and 4.96–4.100).

4.6 The federal government has stated that current scientific knowledge presents compelling evidence of the need for urgent action on smog (4.101–4.103 and 4.125–4.127). Federal strategies on air pollution were originally based on the belief that there were lower limits at which the main pollutants in smog were safe. However, recent research has been unable to identify safe levels of ozone or particulate matter (4.155–4.158).

4.7 Environment Canada expects that air quality will continue to deteriorate unless governments, industry and individual Canadians make a concerted effort to reduce smog (4.96–4.100).

Starting out on the right foot — but failing to take the next steps

4.8 In 1990, the Canadian Council of Ministers of the Environment (CCME) endorsed a three-phase national plan to reduce levels of pollutants. The plan focussed on nitrogen oxides (NOx) and volatile organic compounds (VOC). Both of these lead to the formation of ozone, a major component of smog. The national plan's objective was to "fully resolve" the ozone problems in Canada by 2005 (4.149–4.154).

4.9 We believe that the 1990 NOx/VOC Management Plan represented a major achievement by the federal, provincial and territorial governments and provided sound strategic direction for addressing Canada's smog problem (4.168–4.171).

4.10 However, after endorsing the Plan the partners never reached agreement on the details of a framework for implementing it. The Plan evolved over the past 10 years without many of the key elements of good management (4.172–4.179).

4.11 Environment ministers originally agreed to negotiate federal-provincial partnership agreements within one year, outlining who would do what by when. When no such agreements were prepared, the Plan was destined to fail (4.175–4.176). An appropriate accountability regime was never put in place to clarify the roles, responsibilities and expected performance of each level of government. As a consequence, it is not clear whom the public and Parliament can hold to account should the Plan fail (4.180–4.182).

4.12 Although the 1990 Plan was never implemented as originally envisioned, the federal government did most of what it had said it would do under the first of the Plan's three phases. However, the federal contribution to reducing emissions was expected to be modest compared with the size of the problem. Under the Plan, the efforts of others were supposed to achieve the bulk of emission reductions (4.183–4.194).

4.13 Environment Canada failed to provide the public and Parliament with meaningful, comprehensive and timely information about action on the promises made to Canadians in 1990 and on the results of national efforts. The lack of transparent information means that the public and Parliament cannot determine whether Canada is addressing its smog problem at a reasonable pace (4.195–4.208).

4.14 The federal government acknowledges that despite years of national effort, progress has been slower than planned and the original target date will likely not be met. Moreover, new pollution concerns must be addressed and levels of smog-causing pollutants significantly reduced. Environment Canada has commented publicly on the need for urgent high-priority action to address this chronic and stubborn problem (4.96, 4.126, 4.147, 4.228).

Where to go from here?

4.15 No one level of government and no one industry can resolve the smog problem alone. There is no one solution; dealing with smog will require a long-term, concerted effort by all Canadians. Arrangements must be developed that will work in this difficult context. Canada will need strong leadership from the federal government to encourage co-operative action in all sectors of society (4.92–4.95 and 4.114–4.121).

4.16 As the federal leader in protecting Canada's air quality, Environment Canada has a responsibility that goes beyond its own smog-reduction activities and its co-ordination of federal activities. It is also responsible for facilitating federal/provincial/territorial collaboration and working with its partners to develop effective national strategies and plans (4.125–4.134).

4.17 The federal government has identified the importance of using a broad range of tools to reduce smog. For the most part, however, it has relied on the voluntary co-operation of others and has used regulatory instruments only selectively. It needs to develop a comprehensive federal approach that fully addresses the sources of smog-causing pollutants (4.135–4.144).

4.18 The approach used for federal/provincial/territorial collaboration has proved ineffective at achieving the results promised to Canadians under the 1990 Plan. It remains to be seen whether the new Canada-Wide Standards process under the 1998 Canada-Wide Accord on Environmental Harmonization will be more effective. Whether the new process will establish clear accountability for results and transparent information to the public and Parliament also remains to be seen (4.228–4.232 and Appendix A).

Background and other observations

4.19 The smog problem is difficult and complex. Smog is made up of various pollutants from many different sources. It crosses borders and affects different people in different ways (4.92–4.112). Although smog is defined by its main components — ozone and particulate matter — the "basket" of pollutants that contribute to the formation of smog also includes nitrogen oxides, volatile organic compounds, sulphur dioxide and carbon monoxide (4.25–4.29).

4.20 The air pollutants that cause smog today are largely by-products of industrial activities and the burning of fossil fuels (oil, natural gas and coal). Many of the solutions to the smog problem will require Canadians to change the way they produce and use energy (4.68–4.78 and 4.107–4.109).

4.21 Environment Canada has taken the federal and national lead, and represents Canada at the international level. In Canada, however, no jurisdiction has sole authority to regulate or control all aspects of smog reduction. While the federal government works to reduce smog nationally, complementary efforts of the provinces, territories and municipalities have a major impact on the pace of progress (4.114–4.134 and Appendix E).

4.22 To help assess progress in the future, the federal government needs to work with the provinces and territories to identify and prioritize the requirements of the national air pollutant monitoring network. As part of any future commitments, they need to determine their respective roles and responsibilities for maintaining and enhancing the network (4.209–4.227).

4.23 Ten years after the federal, provincial and territorial environment ministers identified smog as a serious threat to public health and the environment, their governments are still developing national strategies and plans for combating smog. They are considering new standards for ozone and particulate matter, but the proposed targets are far in the future (4.228–4.232 and Appendix A).

4.24 While finding solutions to smog has often seemed beyond Canada's reach, there is cause for hope. Canada has taken action to reduce some of the components of smog and has had some success in improving air quality in general. Canadian governments and industry have demonstrated that they can tackle difficult problems of air pollution, and similar results should be possible with smog (4.60).

The response of Environment Canada is included in this chapter (4.239). The Department agrees that smog is an important public health concern that requires further action and sustained investment. It also agrees that sound management principles should be incorporated into future management arrangements under the Canada-Wide Standards for Particulate Matter and Ozone. Environment Canada is committed to providing meaningful and timely information on performance expectations and results.

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PART I — WHAT, HOW AND WHY?

The federal Minister of the Environment recently stated, "Canadians are especially concerned about air quality. Residents in many areas are subjected to unacceptable air pollution caused by ground-level ozone and airborne particles which combine with other air pollutants to produce smog, particularly in our urban centres. We have taken several steps to reduce smog over the last few years, but a great deal remains to be done... We are committed to clean air... This may eventually mean some changes in lifestyle choices for many Canadians, but I am confident that everyone will appreciate the need for action."

What Is Smog?

4.25 Air pollution is not new. Natural sources of air pollutants have always contaminated so-called "pure air". However, levels of air pollution have risen as humankind has progressed. The rapid growth of cities in the Industrial Age and the widespread use of coal to produce steam and heat homes and factories cast a pall of polluted air over the urban landscape in Europe and North America. Air pollution today is usually a combination of ozone and the pollutants that lead to its formation, as well as particulate matter and toxic contaminants. Many of the pollutants in the air contribute to one or more problems such as acid rain, climate change, air toxics and smog.

4.26 People first used the term "smog" to describe the mixture of smoke and fog in the air above cities. Smog "episodes", periods of dangerously high levels, were recorded throughout the 19th and first half of the 20th centuries. London, England experienced a particularly disastrous episode in December 1952. This was a result of the open burning of coal and a stagnant air mass over the city, leading to a layer of smog that lasted five days and caused about 4,000 deaths. That episode led the industrialized world to make major changes aimed at reducing air pollution.

Today, the common air pollutants that cause smog are largely a result of personal and industrial activities that involve the burning of fossil fuels.

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Panoramic view of Toronto harbour from the foot of Bay and York Streets, 1918 (see paragraph 4.26).

Source: A. Beales, National Archives of Canada, PA136350

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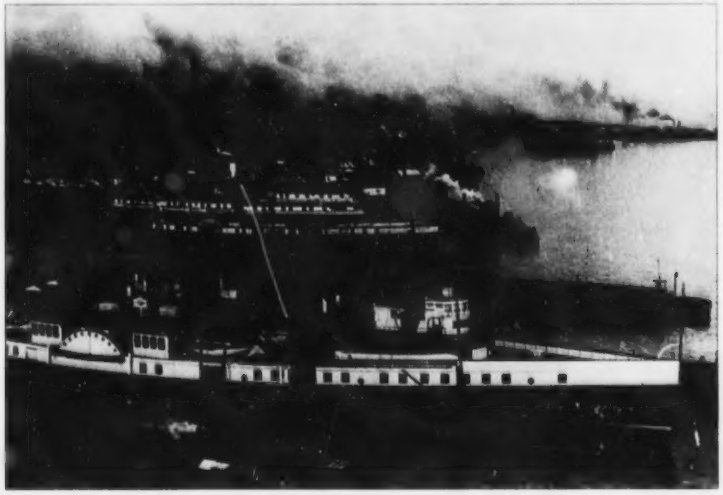


Panoramic view of Toronto harbour from the foot of Bay and York Streets, 1918 (see paragraph 4.26).

Source: A. Beales, National Archives of Canada, PA136350

The federal government defines the main constituents of smog as ozone and particulate matter.

personal and industrial activities. Most air pollution is caused by the fossil fuels (oil, natural gas and coal) used for transportation and burned in our homes, thermal power plants and factories. This group of pollutants has the potential to damage the environment and the health of most Canadians. The federal government defines the main constituents of smog as ozone and particulate matter (PM). However, it recognizes that smog is a "basket" of pollutants that also includes nitrogen oxides (NOx), volatile organic compounds (VOC), sulphur dioxide (SO_2) and carbon monoxide (CO).

4.28 NOx refers to compounds of nitrogen and oxygen that include nitric oxide (NO) and nitrogen dioxide gases (NO_2). NOx contribute to the formation of ozone and particulate matter, and are themselves pollutants. About 95 percent of human-caused nitrogen oxides come from the burning of fossil fuels in motor vehicles, homes, industries and power plants. VOC also contribute to the formation of ozone and particulate matter and include thousands of carbon-containing compounds that evaporate easily into the air. VOC come mainly from fuel combustion and the evaporation of liquid fuels and solvents. SO_2 is a colourless gas with an odour similar to burnt matches; in its acidic form it is the main cause of acid rain. The main sources of airborne SO_2 are coal-fired power-generating stations and non-ferrous ore smelters. CO is a colourless, odourless and tasteless gas produced through the incomplete combustion of organic materials.

Smog-causing pollutants at levels common in Canada are linked to serious health problems.

4.29 In this chapter, we define smog as a collection of these air pollutants commonly found in ambient (outdoor) air. For further information on ozone and particulate matter, see the insert on page 4–13.

Why Should Canadians Care About Smog?

4.30 Most Canadians are affected by smog in one way or another. It is a serious threat to the health of many Canadians and has significant negative impacts on the environment.

Smog is hazardous to health

4.31 According to the Ontario Medical Association, Canada's smog problem represents a health crisis. The federal government has reported that 20 million Canadians, two thirds of the population, are exposed to harmful levels of pollutants that combine in our outdoor air to form smog. Several studies show that smog-causing pollutants at levels common in Canada are linked to serious health problems. Studies over the last decade demonstrate that daily fluctuations in the levels of these pollutants are reflected in the number of deaths, hospital admissions and emergency room visits.

4.32 It is difficult to estimate how many Canadians die each year as a result of smog, but the federal government estimates that in 11 major Canadian cities alone, air pollution is responsible for 5,000 premature deaths a year. Although the government cannot say with certainty, it is probable that these are deaths of people with pre-existing conditions. This is a large number of premature deaths when compared with some of the other involuntary risks that Canadians face (see Exhibit 4.1).

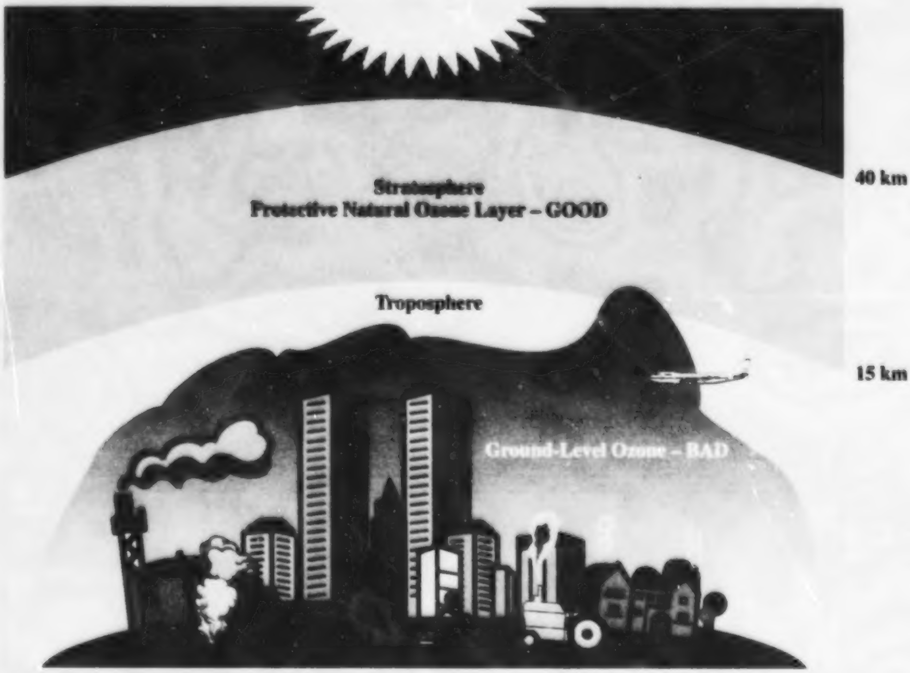
4.33 How smog affects health depends on the type and amount of pollutant a person inhales, for how long and at what level of physical activity. The severity and type of health effects from ozone and particulate matter vary widely and include both short-term and long-term effects (see Exhibit 4.2). But other constituents of smog, such as nitrogen oxides, volatile organic compounds, sulphur dioxide and carbon monoxide, can also affect health.

Ozone and Particulate Matter

Ozone

Ozone in the stratosphere (15 to 40 kilometres above the Earth's surface) occurs naturally and plays an important role as a protective layer around the Earth. It absorbs ultra-violet radiation from the sun and prevents most of it from reaching the Earth's surface. Depletion of this stratospheric ozone leads to the problem known as “the hole in the ozone layer”.

Stratospheric and Tropospheric Ozone in the Atmosphere



Adapted from: United States Environmental Protection Agency, *Ozone: Good Up High, Bad Nearby,* October 1997

Ozone also occurs naturally in the troposphere (ground level to 15 kilometres), but only in very low concentrations. When pollutants from human activity increase these concentrations, ozone can reach harmful levels. Our chapter addresses ground-level ozone, a major air pollutant and a main component of smog. The chapter uses the term "ozone" to refer to ground-level ozone.

Ozone is a powerful and irritating pollutant that is colourless and invisible to the naked eye. Thus, air can appear to be clean and yet still do harm to human health and the natural environment, as well as to buildings and materials. Ozone is not emitted directly. It forms in strong sunlight when nitrogen oxides (NOx) react with volatile organic compounds (VOC) in stagnant air. This means that efforts to limit ozone must also address the sources of NOx and VOC — which can be both natural and human-made.

Whether ozone forms depends on many factors — weather conditions, the landscape, prevailing winds, and the amount of NOx and VOC in the air. Because its formation depends on strong sunlight and is accelerated by heat, its daytime levels are much higher in the summer than in the winter. Levels of ozone can also vary at night. Usually the natural turbulence of the air subsides after the sun goes down and, depending on the time of year, a certain amount of layering of the outdoor air occurs, trapping emissions at the ground level.

Canada has set a national air quality objective or goal for the maximum concentration of ozone in outdoor air. Regions with significant ozone problems during the ozone season (May through September) may not necessarily exceed the national objective in other months of the year.

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Particulate Matter

Particulate matter (PM) refers to a mixture of microscopic solids or liquid droplets (except for pure water) that remains suspended in the air for some time. It is emitted directly or formed by secondary reactions in the atmosphere. PM is unique among air pollutants in that it is not defined by its chemical composition. It can include a broad range of chemical species, including elemental carbon and organic carbon compounds, oxides of silicon, metals, sulfates, nitrates and ammonia. Particle size is considered the most important factor in characterizing the physical behavior of PM. This is because its size affects such things as the length of time it stays in the human body, the length of time it remains in the atmosphere and how it affects visibility. Thus, particle size plays an important role in the effects of smog on health and the environment.

Particles range in diameter from about 0.005 to 100 microns (a micron is one thousandth of a millimetre). Total suspended particulates (TSP) — that is, all particles up to about 75 microns — is the only classification of PM currently included under national air quality objectives. When the national objective for TSP was originally set, research was based on the best standardized methods of the day. Since the late 1980s, better measurement technology has led to new standard measurements of PM 10 and PM 2.5. The smaller particles, less than 10 microns in diameter (PM 10), can penetrate the thoracic compartment of the human respiratory tract. PM 10 is generally subdivided into fine particles, 2.5 microns in diameter or less (PM 2.5), and coarse particles, generally larger than 2.5 microns in diameter. The new data have been used by researchers to better understand the health outcomes of smaller particles.

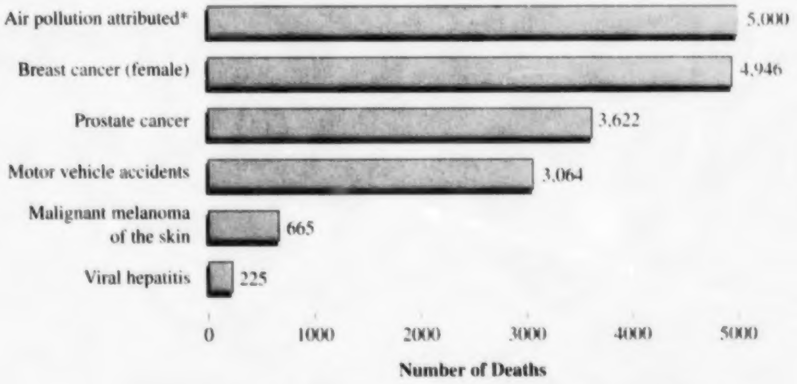
4.34 A main area of health concern is clearly the respiratory system, through which ozone and particulate matter enter the body. Evidence also links cardiac problems to the effects of air pollution.

4.35 Coarse particulate matter from dust and soil can be filtered by the nose and upper airways, and the body expels it more easily. Of increasing concern are fine particles, which penetrate or "fall" more deeply into the lungs. They cannot be expelled by breathing or coughing. In fact, the particles segregate at the bottom of the lungs, resulting in irritation, decreased lung function and shortness of breath, and can exacerbate lung disease. Exhibit 4.3 shows the human respiratory system and the degree of penetration of ozone and particulate matter.

4.36 Individual reactions to smog vary widely. People who are particularly sensitive may show symptoms after only one or two hours outdoors on a smoggy day. Others may display no symptoms at first after exposure to high levels, but may show effects up to a few days later.

Exhibit 4.1

Annual Deaths in Canada Related to Air Pollution Exceed Those From Other Causes



* The federal government estimates that in 11 major Canadian cities alone, air pollution is responsible for 5,000 premature deaths a year.

Other mortality statistics are drawn from the entire Canadian population for 1997.

Source: Government of Canada

(cont'd)

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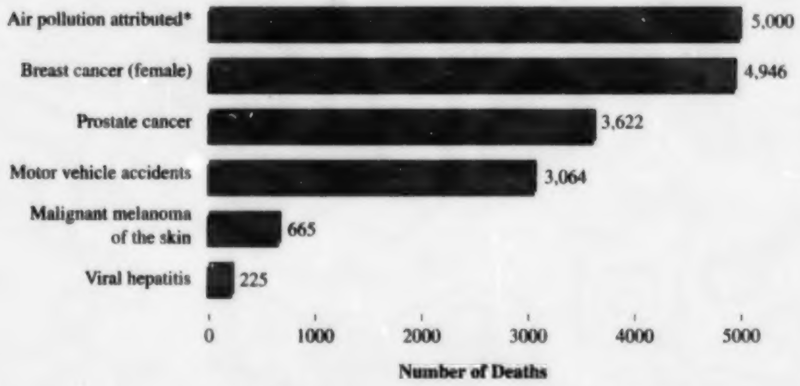


* The federal government estimates that in 11 major Canadian cities alone, air pollution is responsible for 5,000 premature deaths a year.

Other mortality statistics are drawn from the entire Canadian population for 1997.

Source: Government of Canada

4.37 A large percentage of Canadians are susceptible to smog's damaging effects (see Exhibit 4.4). Those at highest risk include the elderly, children, smokers and people who have heart, lung and other respiratory diseases like asthma, emphysema, bronchitis or pneumonia. One in five Canadians now has some form of respiratory problem.

4.38 Overall, asthma affects about two million Canadians. Between 1978 and 1994, the prevalence of asthma increased from 2.5 percent to 11.2 percent of children aged 14 and under. The reasons for this increase are still not clear. It may involve several factors, such as changing awareness among the public and health professionals and changing diagnostic practices. Asthma is a complex disorder of the airways in which inflammation obstructs airflow, causing breathlessness, coughing and wheezing. Although the causes of asthma are still under study, smog is known to at least aggravate it in those diagnosed with the disease, giving rise to an attack or making an attack more serious.

4.39 Chronic obstructive pulmonary disease (COPD) affects 3 percent of all Canadians and 6 percent of those over the age of 55. It results in increasing shortness of breath and eventual death. Smog increases the risk of developing COPD and makes symptoms worse for those with the disease.

4.40 Healthy children, particularly newborns, are believed to be more vulnerable than adults to the effects of smog because they are small and their lungs take in proportionately several times more air, at a faster rate. Air pollution that may only slightly affect adults can cause a significant obstruction in the narrower airways of a young child. Children are also more susceptible because they are more active when playing outdoors. They also spend more time outdoors in the summer, when ozone levels are at their highest.

Canadians at highest risk include the elderly, children, smokers and people who have heart, lung and other respiratory diseases.

Exhibit 4.2

Adverse Health Effects of Smog

Pollutants	Health Effects
Ground-level ozone	• Inflammation and swelling of the airways, with symptoms of coughing, wheezing, nose and throat irritation, pain and tightness in the chest and shortness of breath • Nausea, eye irritation and headaches • Increased respiratory illness, including bronchitis, asthma, pneumonia and emphysema • Decreased lung function, including decreased exercise capacity, premature aging of the lungs and possibly long-term development of chronic lung disease • Reduction of body's defences against infection • Exacerbation of cardio-respiratory disease • Increased mortality rates
Particulate matter (PM 10, including PM 2.5)	• Increased respiratory symptoms • Increased respiratory stress and illness • Decreased lung function • Exacerbation of cardio-respiratory disease • Exacerbation of asthma • Increased mortality rates

Source: Compiled by the Office of the Auditor General

Good health does not protect adults against the damage that smog causes to lungs.

4.41 However, good health does not protect adults against the damage that smog causes to lungs. Those who work or exercise outdoors are susceptible. The more smog they breathe in, the more likely they are to experience effects such as chest tightness, eye, nose and throat irritation, coughing and wheezing. Healthy people exposed to smog breathe less efficiently and faster, taking more ozone into their respiratory tract. Moreover, people who exercise outdoors often do so at midday or in the afternoon, when ozone levels are peaking. Outdoor workers often have no opportunity to seek protection and, when exposed to high smog levels, their work performance could decline. Although not proved, there is also concern that long-term exposure to smog increases susceptibility to heart and lung disease.

4.42 The health pyramid in Exhibit 4.5 indicates that while some Canadians may be dying of smog-related health effects, many more are affected by milder but more widespread impacts on their health and pocketbooks. On days when smog levels are high, absences from school and the workplace increase. Federal government experts have suggested that about six percent of all respiratory problems that lead to hospital admissions in Canada are smog-related.

4.43 The associated costs to Canada's health care system are difficult to identify. However, a study conducted for the Canadian Council of Ministers of the Environment (CCME) estimated that in the years from 1997 to 2020, cleaner air resulting from cleaner vehicles and fuels could provide health and ecological benefits of around a billion dollars a year. "Health benefits" denotes the benefits to society of avoiding mortality and morbidity related to air pollution. Benefits include the value of avoided health care

Exhibit 4.3

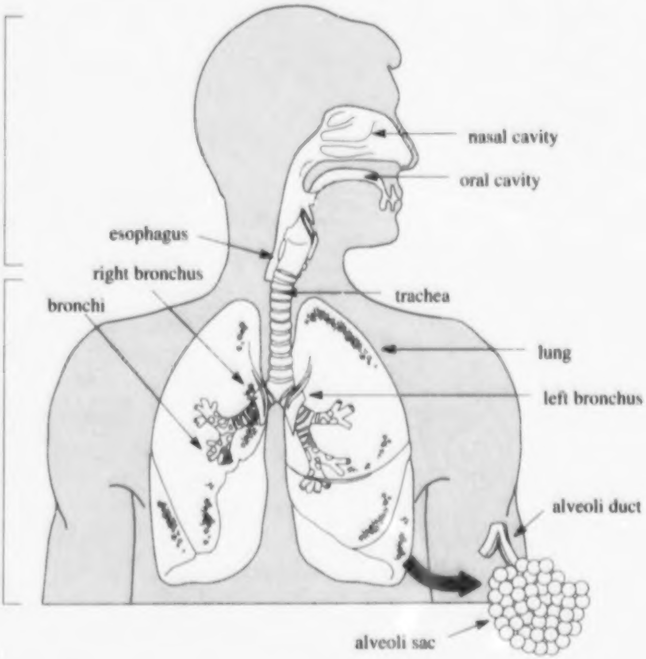
Smog and the Human Respiratory System

Upper respiratory tract

- Ozone irritates upper respiratory tract
- Coarse particulates may be filtered by the nose and upper airway and are more easily expelled

Lower respiratory tract (thoracic compartment)

- Ozone may also penetrate into the lungs
- Fine particles penetrate into the deepest part of the lungs



Adapted from: National Ambient Air Quality Objectives for Ground-Level Ozone Summary Science Assessment Document, Federal-Provincial Working Group on Air Quality Objectives and Guidelines, August 1999 costs, increased productivity and avoided pain and suffering. Annual health and other benefits of achieving the most stringent standards have been estimated at about $10 billion. While these assessments are not without controversy, the health benefits of improving air quality appear to be substantial.

Current objectives do not protect health

4.44 To provide a level of health protection, Canada has national objectives or goals for the maximum levels of ozone and total suspended particulates in outdoor air. However, the objective for ozone is not met in many parts of Canada for several days of the year, and the objective for total suspended particulates is no longer viewed as adequate to protect against the finer particles.

4.45 Moreover, scientists have learned that ozone at concentrations much lower than the current national objective causes adverse health effects. A focus on lowering ozone levels to the current objective would thus fall short of fully protecting the health of Canadians. Many recent scientific studies suggest that the concentrations of particulate matter common across Canada are also potentially harmful. Indeed, recent research has been unable to identify a safe level of ozone or particulate matter.

Children are especially susceptible to the effects of smog when playing outdoors (see paragraph 4.40).

Source: Health Canada

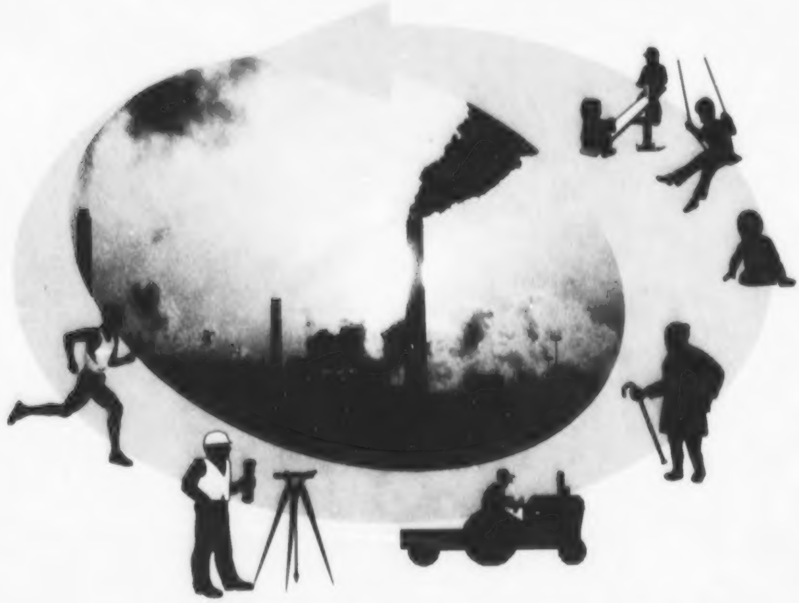
Recent research has been unable to identify a safe level of ozone or particulate matter.

4.46 National efforts to reduce smog have focussed on regions where ozone levels are a persistent problem. Yet many locations across Canada have ozone levels that are below today's national objective

Exhibit 4.4

Populations Most Affected by Smog in Canada

Those at highest risk include children, the elderly, outdoor workers and people engaged in outdoor recreation. People with cardio-respiratory problems are also vulnerable.



Source: Office of the Auditor General

but still considered harmful. There are no national standards for PM 10 (particulate matter less than 10 microns in diameter) or PM 2.5 (particulate matter 2.5 microns in diameter or less), and national efforts to reduce PM are in the early stages (see the insert on page 4–14 for further information). Even so-called clean areas of Canada may require action to reduce emissions and prevent air quality from deteriorating, because the concept of "clean air" is based on the premise that there are levels at which pollutants cause no harm.

Air pollution also poses a serious threat to the environment.

4.47 The CCME has accepted in principle new standards for ozone and PM 2.5; it will consider a possible standard for PM 10 and a more rapid achievement of the ozone standard. Ministers are scheduled to sign accepted standards at the June 2000 meeting of the CCME (see Appendix A for a discussion of Canada-Wide Standards).

Smog has significant environmental impacts

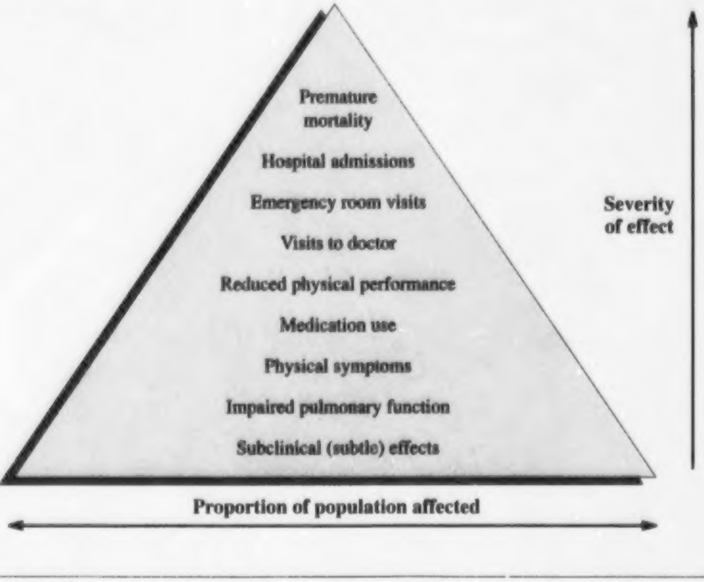
4.48 We know less about smog's effects on the environment than on human health. Protection of the environment has generally been a secondary part of a broader goal to protect the health of Canadians. In recent years, new studies have presented a more complete picture, showing that air pollution also poses a serious threat to the environment.

4.49 Effects on agriculture. Smog and its components can damage farm crops in a number of ways. In problem areas, the current levels of ozone are affecting sensitive crops. Lowered crop yields occur routinely over large areas of the Windsor–Quebec City Corridor in Ontario and Quebec, and in British Columbia's lower Fraser Valley. Ozone damages foliage, affecting plant growth and reducing productivity. Plants can overcome low levels of ozone, but frequent episodes of high ozone levels are particularly damaging. Certain crops are at greater risk, including corn, beans, tomatoes, tobacco, potatoes, soybeans, hay and wheat. Ozone can also injure ornamental flowers and shrubs as well as grass species used in turf-grass production.

4.50 Some estimates suggest that the cost of ozone damage to crops could be in the tens of millions of dollars annually. Potential benefits of meeting current national air quality objectives for ozone have been valued at $17 million to

Exhibit 4.5

The Cascading Health Effects of Air Pollution



Source: Government of Canada, Phase 3 Federal Smog Management Plan Draft, November 1999

$70 million a year in Ontario. Benefits for British Columbia's agriculture sector are estimated at up to $9 million.

4.51 Particulate matter accumulates on leaf surfaces and blocks sunlight, resulting in higher sensitivity to disease, pathogens and climate stresses. Ultimately, this reduces plant growth and yield. Deposits of fine particles can alter the acidity of soils, and eventually affect vegetation.

4.52 **Effects on forests.** Ozone can damage the foliage of forest species, increasing their susceptibility to disease and other stresses. This leads to higher mortality rates and eventually to the overall decline of affected species. Ozone damage may be reducing forest growth and timber yield and contributing to forest decline in some parts of Canada. Many common tree species sensitive to ozone are suffering reduced growth. These include maple, ash, white spruce, white pine, poplar, white birch and red oak. Lowered growth of vegetation and forests can reduce wildlife habitat and degrade ecosystems.

4.53 **Effects on wildlife.** Some studies indicate that breathing ozone causes long-term inflammation and chemical changes in the lungs of animals, reducing their ability to ward off disease. Not enough is known to draw conclusions about the levels of smog that affect birds and animals.

4.54 **Effects on buildings and materials.** Smog-causing pollutants can affect buildings and materials by reducing their aesthetic appeal and hastening their physical and chemical degradation. Particulate matter affects materials such as stone, metals, fabrics and paints by soiling, eroding or corroding the surface. Consequently, numerous household and commercial materials are damaged as well as buildings and monuments. Ozone causes hardening and cracking in elastic materials such as rubber. It weakens synthetic materials such as fabrics and textiles and it fades dyes. Ozone also chips and bleaches oil-based exterior paints, speeds up the corrosive action of SO_2 or NOx on metals, and acts in combination with SO_2 to corrode marble, sandstone, limestone, brick, concrete and gravel.

4.55 **Visibility and aesthetic effects.** The amount of particulate matter in the atmosphere directly affects visibility — for the public, the most apparent indicator of poor air quality. In less polluted areas visibility can reach 350 kilometres, while in more heavily polluted areas it can drop below 30 kilometres. This is a concern in wilderness areas as well as urban centres.

4.56 Fine particulate matter (PM 2.5) contributes to visibility problems by absorbing and scattering light. As humidity increases, the problem gets worse. The resulting yellow-brown or white haze makes it difficult to enjoy the scenery. In severe cases, it may make travel by road or air difficult.

4.57 Particulate pollution is a seasonal problem in the Arctic. Known as "arctic haze", it occurs in winter and early spring when conditions favour the transport and retention of air pollutants. Most of these contaminants originate in the industrial areas of Asia, Europe and North America.

How Widespread Is Canada's Smog Problem?

4.58 Smog is made up of various pollutants from many different sources and affects regions of Canada in different ways. In addition, smog does not stop at national borders.

Smog is made up of various pollutants from many different sources and affects regions of Canada in different ways.

The smog problem persists despite improvements in air quality

4.59 Canadians cannot be complacent about their air quality. Although the quality has improved over the past 30 years through efforts by the federal and provincial governments and industry, new pollution concerns (such as PM 2.5) and a better understanding of already recognized air pollutants have raised new issues. In addition, the federal government has recognized that the current national objectives for levels of ozone and total suspended particulates do not fully protect the health of Canadians. Although air quality across Canada's landmass can be said to be generally good when measured against the current objectives, smog has severe impacts on the urban areas where 80 percent of Canadians live.

4.60 At the same time, there is no reason to despair about the smog problem. In the past, when Canada has made a concerted effort to tackle certain aspects of air pollution, it has had considerable success (see Appendix B). Catalytic converters as well as enhancements to the overall vehicle emission control system, improved fuel efficiency, new smokestacks and other equipment to control industrial sources of pollution, restrictions on stack flaring, vehicle vapour recovery systems and cleaner-burning technologies have all been helpful in reducing smog. Less burning of coal for domestic heating in

Effects of smog on the Vancouver skyline (see paragraph 4.56).

11:58 PST 24 March 1996

11:58 PST 8 September 1995

Source: Province of British Columbia – Ministry of Environment, Lands and Parks winter has also helped. Energy efficiency and alternative energy programs designed to deal specifically with other air issues have also contributed to smog reduction.

4.61 However, it is important to recognize that in tackling the smog problem, both primary pollutants (emitted directly into the atmosphere) and secondary pollutants (formed in the atmosphere through chemical and physical transformation) must be addressed. Secondary pollutants are much harder to control than primary pollutants, such as lead in gasoline, where the greatest successes have been achieved.

4.62 Canada's air quality problems are similar to those in other parts of the world. The Ontario Ministry of the Environment and Environment Canada recently compared ozone and particulate matter levels in six Canadian cities with a number of comparable cities in the U.S., Europe and Australia as well as Johannesburg, Osaka and Singapore. The study indicates that Canadian cities have levels similar to those in many cities outside Canada.

4.63 Environment Canada has assessed trends in air quality up to 1996. The national data show a slight downward overall trend in concentrations of smog-causing pollutants in outdoor air. However, trends vary significantly from one location to another.

4.64 The trends in ozone levels that exceed the national objective are similar to trends in temperature, demonstrating the link between outdoor air temperature and the production of ozone. For example, in 1988 and 1998 — years of unusually hot weather in central and eastern Canada — episodes of high ozone levels were particularly frequent. Aside from variations caused by climate, ozone concentrations are expected to change little in the near future and the potential for ozone pollution remains as high now as it was a decade ago.

4.65 Average urban concentrations of NOx decreased by 26 percent between 1989 and 1996. VOC levels showed little change. Trends in SO_2 and CO showed a marked decrease between 1974 and 1992, but since then reductions seem to have slowed.

4.66 Although data on total suspended particulate emissions and ambient measurements are available back to the early 1970s, routine measurement of PM 10 and PM 2.5 did not begin until the mid-1980s. This makes it more difficult to assess trends in these smaller particles over the longer term. However, while it appears that levels in many Canadian cities fell between 1987 and 1996, they seem to be creeping back up.

4.67 In short, while there have been downward trends in some of the common air pollutants, trends now appear to be levelling off or even increasing as improvements are slowly eroded.

Smog comes from many sources

4.68 Natural sources produce some smog-causing pollutants in all areas of Canada, creating "background levels". For instance, forests produce substantial natural emissions of VOC. These emissions are greatest during the hot summer months but are concentrated outside of urban areas. Natural sources of primary particulate matter include pollen, spores, bacteria, and debris from forest fires. Secondary particulate matter is also formed in the atmosphere by pollutants from natural sources.

4.69 In the urban areas, however, where the smog problem is the most severe, human-made emissions expose people to the hazards of smog far more than natural sources do. A wide variety of sources emit pollutants that cause smog. These sources can be divided into three types:

- **point sources** — stationary sources such as coal and oil-fired electrical generation plants or industrial facilities;

- **mobile sources** — motor vehicles, trains, planes or ships that burn fossil fuels; and
- **area sources** — small, widely distributed non-mobile sources that have a cumulative impact on a larger area — for example, burning wood in homes, pumping gasoline, and using solvents and paints. Area sources also include contaminants from agricultural operations (pesticides and dust) as well as forest fire debris and dust from roads and construction sites.

4.70 The 1995 Canadian Emissions Inventory of Air Contaminants contains estimates for emissions of smog-causing air pollutants from more than 60 industrial and non-industrial activities and more than 4,600 industrial sources. Ninety-five percent of the smog-producing emissions come from 38 different sectors. Exhibit 4.6 provides information on emissions of NOx, VOC, SOx (sulphur oxides, including SO_2) and CO by category, and indicates the top six sources of each pollutant. (For further information on the major sources of smog-causing pollutants by category, see Appendix C.)

4.71 The 1995 inventory shows that national NOx emissions were dominated

Exhibit 4.6

1995 Emissions of Nitrogen Oxides, Volatile Organic Compounds, Sulphur Oxides and Carbon Monoxide

In this exhibit, the pie charts show the breakdown by category for each pollutant, while the bar charts show the top six sources of each pollutant.

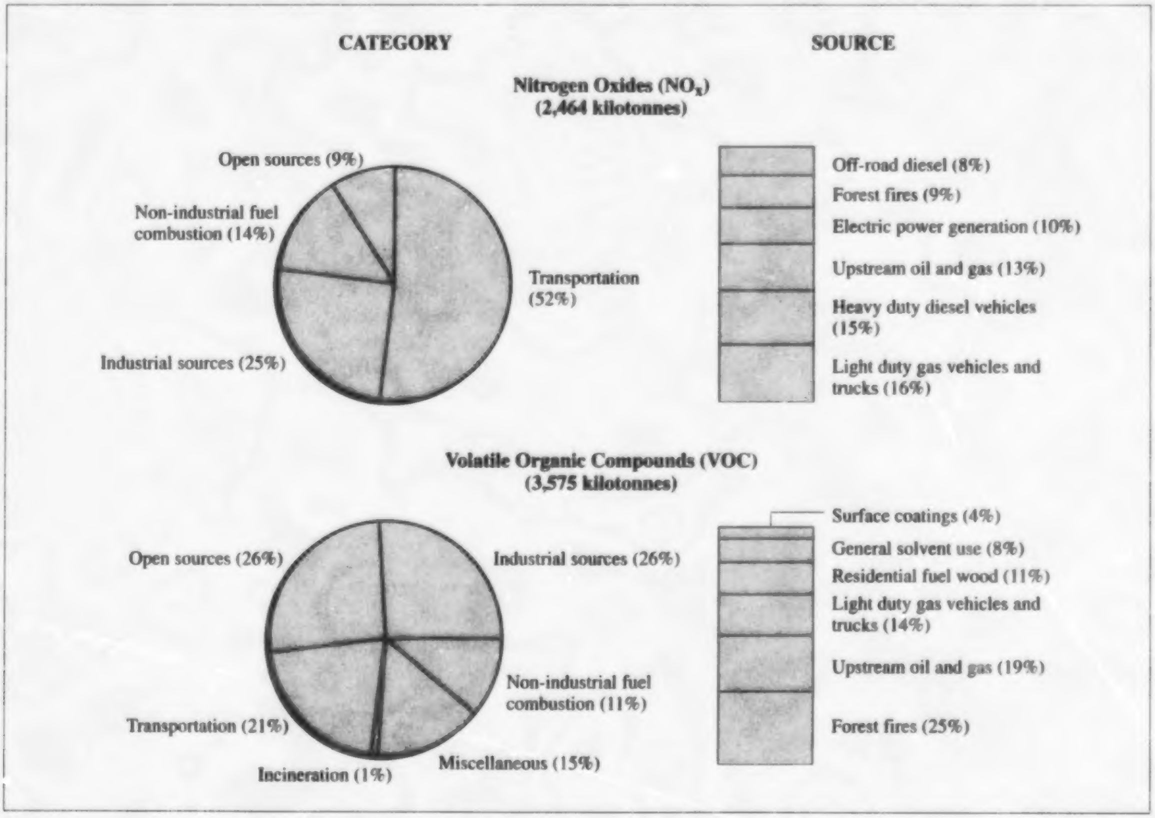
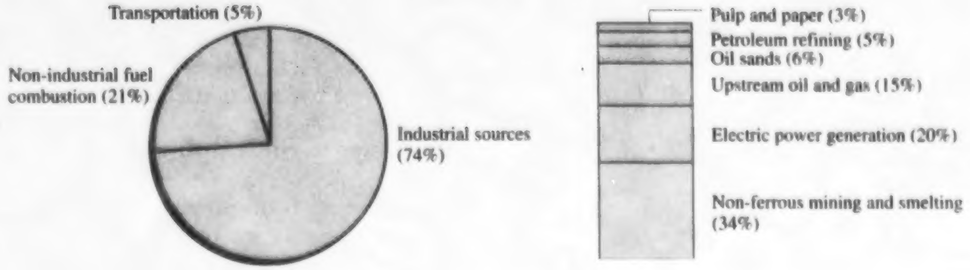


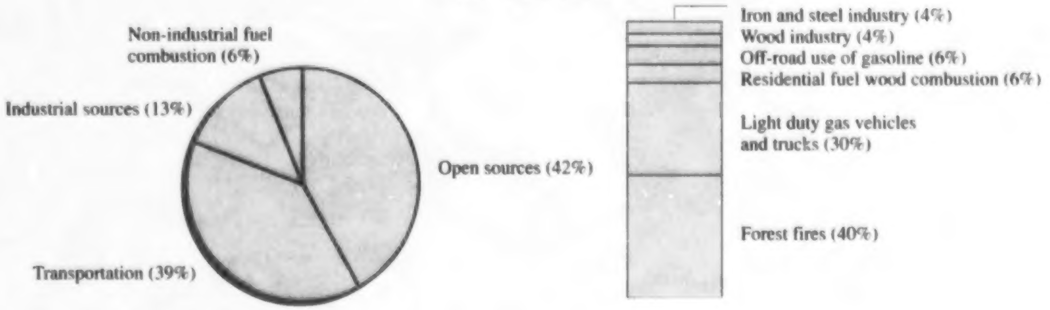
Exhibit 4.6 (cont'd)

CATEGORY **SOURCE**

Sulphur Oxides (SO_x)
(2,654 kilotonnes)



Carbon Monoxide (CO)
(17,128 kilotonnes)



Source: Environment Canada, Canadian Emissions Inventory of Air Contaminants, 1995

by the combined emissions from the transportation category, which accounted for more than 52 percent of the national total. Next highest were emissions from the industrial sources category (particularly the upstream oil and gas industry) at roughly 25 percent, and the non-industrial fuel combustion category (particularly electric power generation) at around 14 percent.

4.72 The industrial sources and open sources categories each accounted for about 26 percent of national VOC emissions, closely followed by the transportation category at 21 percent. Next was the miscellaneous category with about 15 percent of the national total, and the non-industrial fuel combustion category with an estimated 11 percent.

4.73 The industrial sources category (particularly the non-ferrous mining and smelting industry) dominated the national total of SOx emissions with an estimated 74 percent, followed by the non-industrial fuel combustion category (particularly electric power generation) at about 21 percent. The sectors in the transportation category contributed about 5 percent to the national total.

4.74 The open sources category, particularly forest fires, ranked the highest in CO emissions, at roughly 42 percent of the national total. Close behind was the transportation category, which contributed about 39 percent of national CO emissions. Exhibit 4.7 highlights transportation's role in emissions of CO, NOx and VOC.

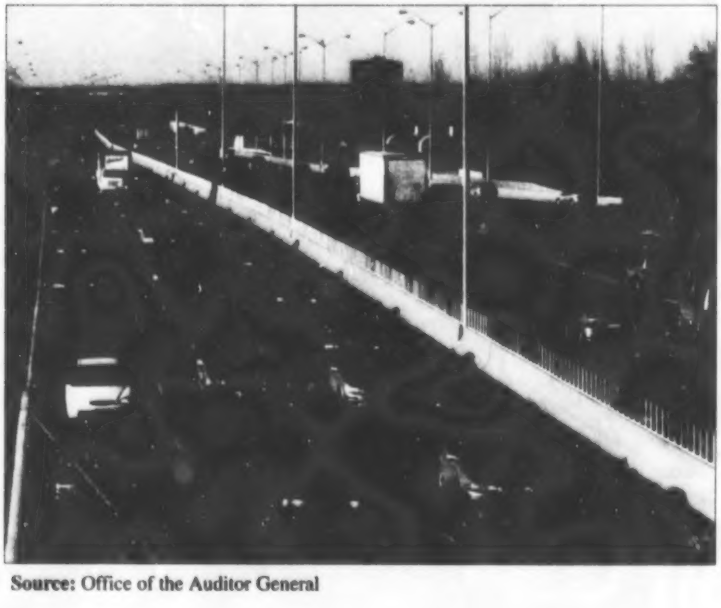
4.75 The combined PM 10 emissions from the open sources category (particularly agriculture tilling and wind erosion, dust from unpaved and paved roads, forest fires and construction) accounted for around 90 percent of the national total. Industrial sources, the second leading category, accounted for only 5 percent of the national total. However, the inventory estimates of some of the open source sectors or activities, notably unpaved roads, are under review and are thought to be overestimates. Exhibit 4.8 provides information on emissions of primary particulate matter.

4.76 Emissions of PM 2.5 were also dominated by the open sources category (particularly forest fires and dust from roads). However, some of the emissions from open sources are also thought to have been overestimated. In addition, there were significant emissions from the industrial sources category (particularly the wood industry and pulp and paper) and from the non-industrial fuel combustion category (particularly residential fuel wood combustion).

4.77 It is important to note that the open sources of PM, which the inventory tends to show as major contributors, are usually in remote or rural areas (forest fires, for example). At the same time, secondary particulate matter (which is not reflected in the emissions inventory) is found in more populated areas of Canada and is largely a result of human activity

Exhibit 4.7

Ever-Increasing Number of Vehicles on the Road



Transportation in Canada is one of the largest contributors to poor air quality. The transportation sector includes around 17 million cars and light trucks, or roughly one passenger vehicle for every two Canadians. While cars are becoming lighter, more fuel-efficient and less polluting, the increasing number of vehicles on the road erodes the benefits of improved technologies. Vehicles in urban areas are a significant source of smog-causing pollutants, particularly NOx, VOC and CO. Diesel vehicles are also responsible for a significant percentage of particulate matter in urban air.

Source: Office of the Auditor General

(industrial processes and fossil fuel combustion in electric power plants, vehicles, industrial boilers, and residential heating).

4.78 If Canada is to reduce smog substantially, it is clear that many different sectors will have to be involved. While transportation is one of the largest contributors to poor air quality, other sectors such as energy and industry will also need to continue reducing emissions.

Not just an urban problem

4.79 Although cities produce the most smog-causing pollutants, smog is more than an urban problem. As air currents carry pollutants downwind over long distances, ozone continues to form. Smog can affect areas up to a few thousand kilometres away from pollution sources, creating a blanket of pollution over a fairly large region.

4.80 The reactions that produce ozone are complicated. For example, excessive levels of NOx can destroy (scavenge) ozone in the immediate area surrounding the source while contributing to a larger overall burden of pollutants and more elevated ozone levels downwind. This often means that urban cores experience lower ozone levels than downwind suburban areas.

4.81 Each region and urban area in Canada has its own pattern of air pollution and its own causes of elevated levels. Regions vary in the level of naturally occurring air pollutants, wind currents, sources and distribution of emissions, industries, population, traffic, geography and weather patterns. Strategies to reduce smog need to factor in these regional conditions. (See Appendix D for a geographical presentation of emissions.)

Ozone problem areas

4.82 The number of days when ozone levels exceed the national objective varies greatly from region to region; so does the degree to which emissions of NOx or VOC contribute to the local ozone problems. In some areas with high ozone levels, the main contributor is NOx; in other areas it is VOC. In most urban regions, however, ozone production is dominated by NOx.

4.83 While ozone problems often extend beyond urban areas, they are nevertheless highly regionalized. Historically, three particular areas in Canada have had unacceptable levels of ozone most often and for the longest periods of time. These areas are the

Although cities produce the most smog-causing pollutants, smog is not just an urban problem: air currents carry pollutants over long distances.

Exhibit 4.8

PM 10 and PM 2.5 Emissions in 1995 – Dominant Sectors

PM 10 Emissions

Sector	% National Total
Dust from unpaved roads	38
Agriculture tilling and wind erosion	16
Forest fires	13
Construction operations	10
Dust from paved roads	10
Agriculture (animals)	3
Residential fuel wood combustion	3
Wood industry	2
Pulp and paper industry	1

PM 2.5 Emissions

Sector	% National Total
Forest fires	39
Dust from unpaved roads	20
Residential fuel wood combustion	9
Dust from paved roads	9
Wood industry	4
Pulp and paper industry	3
Heavy duty diesel vehicles	2
Prescribed burning	2
Other industries	2
Agriculture (animals)	2
Agriculture tilling and wind erosion	1
Electrical power generation	1
Rail transportation	1
Off-road use of diesel	1
Construction operations	less than 1

Source: Environment Canada, Canadian Emissions Inventory of Air Contaminants, 1995

Windsor–Quebec City Corridor of Ontario and Quebec, the Southern Atlantic Region (particularly the Bay of Fundy and Saint John areas), and the lower Fraser Valley of British Columbia (which includes Vancouver).

4.84 The Windsor–Quebec City Corridor, the most urbanized and industrialized part of Canada, experiences the country's highest concentrations of ozone from a combination of local, regional and long-range sources of pollutants. The current ozone objective is exceeded as often as 25 percent of summer days. Southwestern Ontario is the part of the corridor most affected by smog. Elevated ozone levels occur more frequently at rural sites than in urban industrial centres such as Toronto and Hamilton. This is because of the contribution from the U.S., and the scavenging effects of local NOx emissions in the cities. The smoggiest place in Canada is in rural southwestern Ontario along the north shore of Lake Erie, as confirmed by a monitoring site in Long Point Provincial Park. This area typically exceeds the current objective 30 days each year.

Over 50 percent of the Canadian population is routinely exposed in summer to ozone levels above the national objective.

4.85 In the Southern Atlantic Region the majority of NOx and VOC pollutants and days of elevated ozone usually occur around the Bay of Fundy and Saint John, New Brunswick. They are attributed largely to the long-range transport of ozone and NOx and VOC from the U.S. Most of the pollution comes from the northeast and midwest U.S., with a small contribution from the Windsor–Quebec City Corridor.

4.86 The lower Fraser Valley has had a significant smog problem. Vehicular and other emissions are trapped by the surrounding mountains, resulting in a pocket of stagnant air in which pollutants accumulate. Ozone episodes in this area, including the city of Vancouver, come primarily from local sources of NOx and VOC. Air quality has improved since the early 1980s and the frequency of ozone exceedences is currently low. While this area has ozone pollution, particulate matter is also a significant problem.

4.87 Canada's national efforts to reduce smog have so far focussed on these three ozone problem areas. However, the impact of the recent ozone science assessment has changed the way ozone's impacts on health are characterized. There is less emphasis on extreme episodic events than on chronic levels. This will change the geographic focus of management efforts, given that the national ozone objective is exceeded regularly in most of Canada's populated areas (see Exhibit 4.9). During peak growing seasons, it is also exceeded in the most fertile areas of crop production. It has been determined that over 50 percent of the Canadian population is routinely exposed in summer to ozone levels above the national objective.

Particulate matter problem areas

4.88 Unlike ozone, particulate matter shows no consistent seasonal pattern. Nationally, it is a year-round problem, with some regions seriously affected in winter and others in summer. Concentrations in outdoor air vary significantly across Canada. Both local and long-range sources affect the amount and type of particulate matter at any location. Industries in the U.S. are a major source of PM in some regions of Canada.

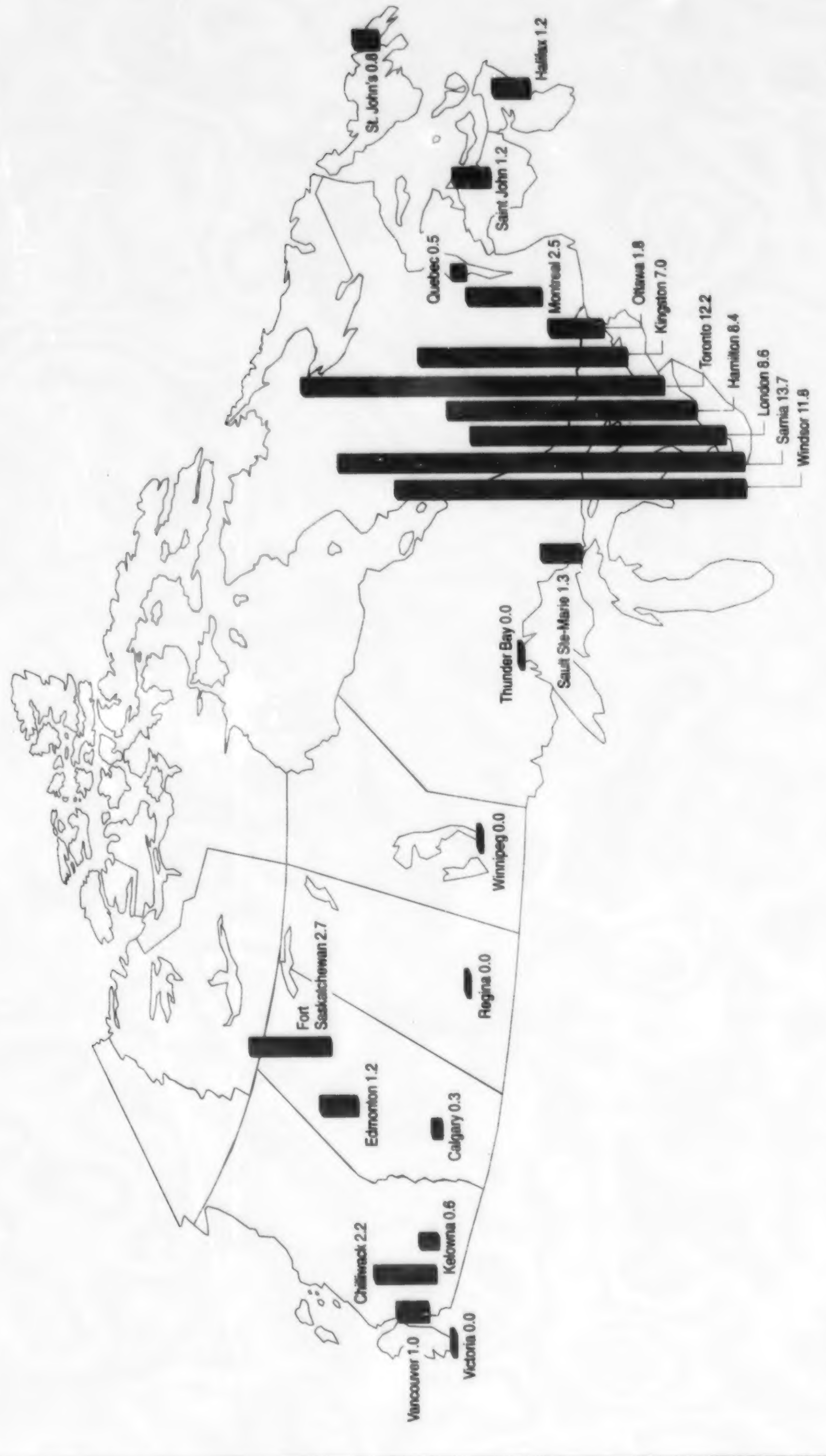
4.89 Particulate matter is a more widespread problem than ozone. It occurs in larger cities mainly because of construction, industries, motor vehicles, heating plants and residential furnaces. Levels in most large Canadian cities are thought to have significant impacts on human health. These levels are similar to levels in major U.S. cities.

4.90 The highest concentrations of the coarser particles are often found in small communities with major industry (for example, Temiscaming, Quebec; Shawinigan, Quebec; Sault Ste. Marie,

Exhibit 4.9

Canadians' Exposure to Ozone Levels Above the National Objective

Average number of days per year when the 1-hour ozone national air quality objective (82 ppb) was exceeded at selected cities (1991–1996)


St. John's 0.8
Halifax 1.2
Saint John 1.2
Quebec 0.5
Montreal 2.5
Ottawa 1.8
Kingston 7.0
Toronto 12.2
Hamilton 8.4
London 8.6
Sarnia 13.7
Windsor 11.8
Sault Ste-Marie 1.3
Thunder Bay 0.0
Winnipeg 0.0
Regina 0.0
Fort Saskatchewan 2.7
Edmonton 1.2
Calgary 0.3
Kelowna 0.6
Chilliwack 2.2
Vancouver 1.0
Victoria 0.0

Adapted from Environment Canada

Fine particle matter has emerged as another main component of smog that poses serious health concerns.

Ontario; Quesnel, B.C.; and Cranbrook, B.C.). Urban areas such as Montreal, Hamilton, Windsor, Winnipeg, Regina, Calgary, Edmonton and Vancouver also experience high levels of particulate matter. Rural areas experience elevated levels of coarse PM linked to agricultural operations and unpaved roads.

Smog does not stop at national borders

4.91 Because smog moves freely across provincial, territorial and national boundaries, it must be dealt with as a transboundary or international issue. Of most concern to Canada are the pollutants that flow from the U.S. They represent a significant percentage of the air pollutants in some areas of Canada. Exhibit 4.10 shows the regions most affected by U.S. air pollutants that prevailing winds carry into central and eastern Canada in the summer. Environment Canada estimates that air pollutants from the U.S. may cause up to half of the ozone in southwestern Ontario and up to 75 percent of the ozone in the Southern Atlantic Region. Although not reflected in the pollution river diagram, pollutants also flow from Canada into the U.S. The issue of transboundary flows into the U.S. from Canada may become more important since PM, unlike ozone, is also a problem in the winter when predominant airflows are into the U.S.

Why Is the Smog Problem So Difficult to Solve?

4.92 In Canada, ozone remains a problem. Moreover, PM 2.5 has emerged as another main component of smog that poses serious health concerns. Why, then, has progress on smog been so slow? What are the challenges to finding solutions?

Solutions will be as complex as the problem

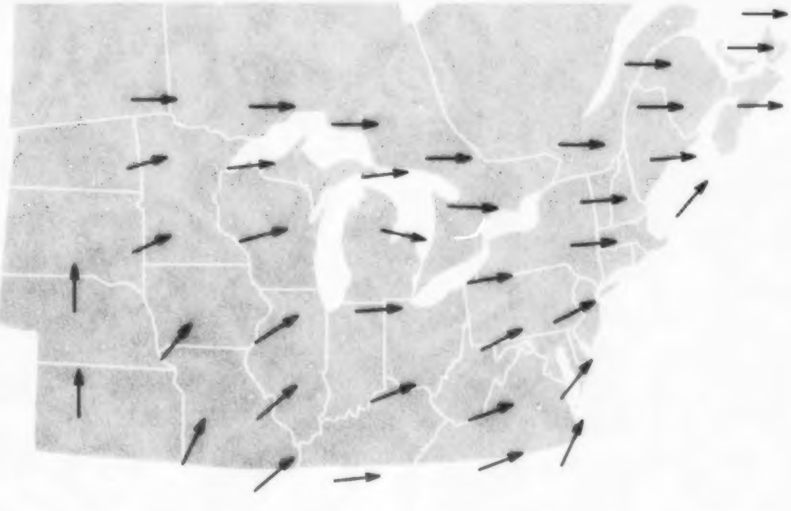
4.93 To reduce smog, Canada will need to reduce emissions of the various pollutants that cause it. These emissions come from a wide range of sources in many different sectors. Transboundary and natural sources are also a significant factor in many regions.

4.94 Reducing smog, then, is not simply a matter of cleaning up a few industrial plants. The easiest gains may already have been made, and the eventual solutions will likely be increasingly complex and require a broad range of control measures. Whether these measures work will depend on many factors: weather conditions, levels of NOx and

Exhibit 4.10

Summer Prevailing Winds

Summer prevailing winds from the U.S. bring air pollutants into central and eastern Canada.



Source: Government of Canada, Phase 3 Federal Smog Management Plan Draft, November 1999 (Adapted from Schichtel and Husar)

VOC emissions and other relevant pollutants, the transport of both human-made and natural emissions and the natural concentrations present in the air. Tackling the smog problem will require an approach that addresses all the pollutants and integrates initiatives on other air problems like climate change, air toxics and acid rain.

4.95 It will take a concerted, long-term and continuous effort to solve Canada's smog problem. This effort must involve all levels of government, most economic sectors and individual Canadians. Actions taken now may yield few benefits for 10 to15 years. For example, standards for energy efficiency will take time to have an impact. New, tougher vehicle emission standards and alternative fuels that cause less pollution will take nearly a decade to be fully reflected in the Canadian fleet of vehicles.

It will take a concerted, long-term and continuous effort to solve Canada's smog problem.

Canada's growth is overtaking improvements in air quality

4.96 The federal government believes that significant reductions of 50 percent to 75 percent of NOx and VOC would be needed to meet the current air quality objective for ozone. However, according to the federal government, even full implementation of the first phase of the Canadian Council of Ministers of the Environment Management Plan for Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOCs) (hereinafter referred to as the 1990 NOx/VOC Management Plan) would, at best, only offset the impact of growth and result in modest improvements in the ozone problem areas. That is why the 1990 Plan called for up to two more phases to achieve the goal.

4.97 Population and economic growth, increased emissions from greater use of vehicles, and higher consumption of energy are overtaking national progress against smog. Exhibit 4.11 presents a worrisome picture of trends that are expected to continue into the future, working against improvements in Canada's air quality.

4.98 Unless Canada and the U.S. significantly reduce their NOx and VOC emissions, little change in annual mean ozone levels can be expected in the near future. Higher levels can also be expected if the number of unusually hot summers increases.

4.99 As no estimates of secondary PM are available, it is difficult to forecast national trends in outdoor levels of PM. It is hoped that domestic and U.S. action to reduce the major contributors to PM formation will lead to a decline in ambient levels of PM.

4.100 Given the uncertainties in the data and the limitations of methodology, forecasts must be used with great care. Nonetheless, Environment Canada expects that air quality in general will continue to deteriorate and emissions of key pollutants to rise after 2010 unless governments, industry and individual Canadians make a concerted effort to reduce smog.

Air quality will continue to deteriorate unless governments, industry and individual Canadians make a concerted effort to reduce smog.

Uncertainties in knowledge about smog and related health effects

4.101 While the federal government believes that the available scientific information on smog is sound, it has identified significant knowledge gaps. For example, no one knows precisely how the mix of pollutants meet to cause smog, or the exact level of intervention needed to reduce it, nor the nature of the reductions that are needed. This is particularly true of particulate matter.

4.102 In the last decade, much more has been learned about smog's health effects. However, more information is needed on, for example, how long-term exposure affects underlying health, what smog actually costs society, and how health risk is distributed in the population.

4.103 The government believes that to tackle the smog problem aggressively and

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to better protect human health, it must address these gaps in knowledge and improve the use of scientific tools like the monitoring of pollutants in outdoor air. At the same time, it believes the available scientific knowledge provides compelling evidence that smog is a major problem today, posing a serious threat to the health of Canadians.

There is a trade-off between clean air and what Canadians are willing to pay to get it.

Resolving the problem will be costly

4.104 Even as environmental problems worsen, the federal, provincial and territorial governments have less money to spend on solutions. New and emerging environmental problems such as climate change are stretching the diminishing resources ever thinner.

4.105 National efforts to reduce smog will have significant costs to governments and to industry. In the 1990 NOx/VOC Management Plan, the federal government suggested that fully resolving Canada's ozone problem by 2005 could cost billions of dollars. As part of the current Canada-Wide Standards process, annual costs of air pollution abatement were calculated as a percentage of Canada's 1995 gross domestic product (GDP). The 1995 GDP was approximately $807 billion. Based on seven alternative target levels for PM and ozone, estimated annual abatement costs ranged from $968 million (0.12 percent of GDP) to $22 billion (2.74 percent of GDP).

4.106 Governments must weigh the cost of smog's impact on human health and the environment against the costs of reducing the pollutants that cause it. Assessing the economic and social impacts of air pollution is a complex undertaking, and all estimates of costs and benefits are approximate at best. In the end, there is a trade-off between clean air and what Canadians are willing to pay to get it.

Major changes in lifestyle are needed

4.107 All Canadians have a role to play in solving the smog problem in Canada. In a 1999 survey conducted for Health Canada, 24 percent of Canadians identified air pollution as the most serious environmental issue facing their provinces and 61 percent said they were "very

Exhibit 4.11

Worrisome Future Trends

Population growth. As Canada's population continues to grow, particularly in urban areas, the demand for goods and services that are linked to sources of smog-causing pollutants will also increase.

Urban living. Increased suburban living results in increased dependency on automobiles and longer commutes. More people are living in larger, more polluted urban centres, increasing traffic congestion, while the use of urban transit is declining.

Transportation trends. While less-polluting vehicles will help to reduce emissions by the transportation sector, there are offsetting pressures such as more vehicles per family and more miles travelled; heavier vehicles, which may be more polluting; increased yearly travel by most modes (especially by personal-use vehicles and planes); and shifts to more energy-intensive modes of transportation such as trucking.

Increasing use of fossil fuel. Emissions from fossil fuels are expected to rise for several reasons: deregulation of electricity generation and increased use of cheaper, more polluting coal to generate electricity; aging nuclear reactors temporarily taken out of service and replaced with coal-burning plants (increasing NOx and SO2 emissions); and fossil fuel prices that discourage such conservation measures as buying smaller cars and using vehicles less.

Health concerns. The number of people susceptible to smog (for example, the elderly) is growing.

Climate change. Global warming will induce the production of ground-level ozone, and extra electrical energy will have to be supplied to diminish the effects of heat waves (for example, air conditioning). Where electrical power is obtained by burning fossil fuels in power plants, emissions of NOx into the atmosphere may increase unless new technologies are developed.

Source: Compiled by the Office of the Auditor General

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Source: Compiled by the Office of the Auditor General

concerned" about air quality problems. While many Canadians are aware that smog is bad for their health and their environment, there is a need to improve their understanding of the problem and what they can do about it.

4.108 Federal officials believe that public education is vital to the success of Canada's national smog initiatives and, while people are now more aware that smog is a health hazard, they are not changing the behaviour that contributes to it. Furthermore, there is little evidence that "smog warnings" encourage such change. Environment Canada has developed a Web site that provides the public with more information on smog and on actions they can take. (For more information see http://www.ec.gc.ca/smog/index.htm)

4.109 The federal government has noted that many of the solutions to the smog problem will require Canadians to change the way they use and produce energy. However, it will be difficult to reduce the use of vehicles that burn fossil fuels when our way of life depends on them. Solutions may include changing production and consumption patterns, developing cleaner fuels, using cleaner modes of transportation, designing more efficient cities and developing new technologies and alternative sources of energy. It will be a huge challenge to secure public support for reductions that will require major changes in the way many people live.

The federal government cannot solve the smog problem on its own

4.110 The complexity of the smog issue is reflected in the number of stakeholders who play a role in tackling the problem. While Environment Canada sees its role as providing national leadership, it must work in partnership and close co-operation with other federal departments and the other levels of government in Canada. For example, to be successful the three-phased 1990 NOx/VOC Management Plan relied on close co-operation between federal and provincial departments, and a co-ordinated response by federal departments.

4.111 Moreover, improving Canada's air quality will also depend on efforts by other countries, particularly the United States. Air quality problems in parts of Canada can be fully addressed only if action is co-ordinated with U.S. efforts to reduce emissions. Although the scope of our work did not include a review of Canada's international commitments, it is important to note that Canada has entered into several agreements with the U.S. and others to reduce transboundary air pollution. Most recently, the two countries agreed that an Ozone Annex under the Agreement between the Government of Canada and the Government of the United States of America on Air Quality (hereinafter referred to as the 1991 Canada–U.S. Air Quality Agreement; see Appendix E) would be completed in the year 2000. However, the federal government believes that to strengthen its position on the flow of pollutants from the U.S., Canada needs a strong and credible program of domestic smog reduction.

4.112 Because many industry sectors operate throughout North America, Canadian strategies for smog control have to consider U.S. initiatives. For example, current Canadian regulations on road vehicle exhaust emissions are harmonized with those in the U.S. New initiatives to reduce VOC in common consumer products will closely reflect recently developed U.S. standards.

4.113 Part II of this chapter describes the federal and national approach to addressing Canada's smog problem and sets out the roles and responsibilities of the various players. Part III examines the federal government's role in Canada's national smog-reduction program, the 1990 NOx/VOC Management Plan.

PART II — THE NATIONAL APPROACH TO SMOG REDUCTION

Addressing Smog Is a Shared Responsibility

4.114 The federal government has an important role to play in addressing Canada's smog problem, in view of its responsibility to protect the "public good". In addition, the fact that smog crosses national, provincial and territorial boundaries clearly places the issue under federal jurisdiction. The federal government provides national leadership to ensure that Canada's air quality supports healthy people and a healthy environment.

Protecting Canada's air requires collaboration among a number of jurisdictions and interests

4.115 Protecting the environment is a complex endeavour that affects many aspects of Canadian life. All Canadians need to participate if we are to preserve our natural environment for future generations.

4.116 In Canada, no jurisdiction has sole authority to regulate or control all aspects of environmental protection. The federal and provincial/territorial governments share responsibility for Canada's environment, and each has certain powers to regulate actions in its own domain. While the federal government works to reduce smog nationally and internationally, complementary efforts of the provinces, territories and municipalities will have a major impact on the pace of Canada's progress.

While Environment Canada sees its role as providing national leadership, it has to work in partnership with other federal departments, other jurisdictions and industry.

4.117 While Environment Canada sees its role as providing national leadership to address Canada's smog problem, it has to work in partnership with other federal departments, other jurisdictions and industry. Although industry and governments are the primary partners, the success of any national smog program requires the support and participation of individuals and their communities. Improving Canada's air quality also depends on other countries' efforts to reduce emissions, particularly the United States.

Provinces and territories play a key role

4.118 The provinces and territories play a key role in Canada's ability to achieve its national goals for smog reduction. The Canadian Constitution empowers the provinces to make laws governing property and civil rights and gives them jurisdiction over much of the land and resources within their boundaries. They are responsible for most aspects of roads and highways, urban planning and transportation, fuel taxes, vehicle licensing and inspections of in-use vehicle emissions, as are the territories. Territorial jurisdiction in these areas is derived from federal enabling legislation.

4.119 Some of the most important aspects of air quality management in Canada are at the provincial/territorial level. Provinces and territories establish air quality objectives or criteria for levels of smog-related pollutants in outdoor air. They also have laws and regulations to control emissions from industrial facilities and other sources. They do this largely through operating permits that they issue to individual facilities, stipulating emission limits and other environmental protection requirements.

Municipalities also play a key role

4.120 Many municipalities have authority to enact air quality by-laws. In some special cases, the provinces have delegated formal responsibility to municipalities for managing air quality and issuing permits. In addition, given their involvement in public transit and land-use planning, municipal governments are important players in "greening" transportation, a key element in addressing the smog problem. The ultimate goal of "greening" transportation is to encourage the general public to opt for alternative means of transportation and cut daily vehicle emissions.

Provincial, territorial, municipal and industry initiatives under way

4.121 A wide range of provincial, territorial, regional and municipal plans and programs address the various components of smog. Many involve co-operative efforts with business, industry, non-governmental organizations and other stakeholders. Some industry sectors have studied their own emissions and have taken voluntary steps to reduce them. Community groups in urban areas have also begun initiatives to improve local air quality.

Developing Ways of Working Together

4.122 We would expect the federal government to act on the smog problem in the areas where it has legal responsibility and jurisdiction. However, some of the needed actions are under the jurisdiction of the provinces, territories and municipalities. Accordingly, agreements and co-ordinating mechanisms have been set up for federal, provincial and territorial co-operation in an effort to obtain broad-based agreement for action.

4.123 The Canadian Council of Ministers of the Environment (CCME) is a key national co-ordinating body on environmental issues. It is made up of federal, provincial and territorial ministers of the environment. Ministers normally meet twice a year to discuss national priorities on which governments agree to work co-operatively. The CCME operates by consensus; while the Council can propose national policies and strategies, it cannot impose its suggestions on its members. Each jurisdiction decides whether or not it will adopt CCME proposals.

4.124 Throughout the 1980s, ground-level ozone gradually emerged as a focus of concern in Canada. At that time, ozone was viewed as the main component of smog. A historically bad smog season in 1988 brought the issue to a head. That year, the CCME decided to request that a national management plan be developed for the control of nitrogen oxides (NOx) and volatile organic compounds (VOC), the pollutants that form ozone. Exhibit 4.12 gives highlights of developments since then.

The Federal Approach to Smog Reduction

Federal roles and responsibilities

4.125 Environment Canada says that Canadians are concerned about the health effects of air pollution and want an undiminished federal role in protecting the environment and their health. Canadians look to the federal government to set national goals that protect the environment, their health and their natural legacy.

4.126 The Department also says there is a need for strong and effective federal government leadership in tackling clean air issues, and it sees itself as providing some aspects of that leadership. It has indicated that improving Canada's air quality is an urgent and high-priority issue for the Department.

Improving Canada's air quality is an urgent, high-priority issue for Environment Canada.

4.127 Environment Canada has taken the lead in co-ordinating the Canadian smog effort nationally and internationally. Although it has the primary federal responsibility for air quality, it shares the work on smog with Transport Canada, Health Canada, Natural Resources Canada

Exhibit 4.12

Chronology of Smog Initiatives

1990	Commitment by federal and provincial/territorial ministers of the environment to the 1990 NOx/VOC Management Plan. The Plan outlines the first in a three-phase national program intended to resolve the problem of ground-level ozone by 2005. The Plan encompasses over 60 initiatives, with the work to be shared by the federal, provincial, territorial and municipal governments. The federal government assumes the lead for a number of the initiatives.
1993	The Canadian Council of Ministers of the Environment (CCME) and their energy counterparts in the Council of Energy Ministers (CEM) sign an agreement outlining a Comprehensive Air Quality Management Framework for Canada. Since that time, federal/provincial/territorial efforts on air issues have been co-ordinated through joint meetings of these two groups of ministers. Meetings between the CCME and the CEM are referred to as Joint Ministers Meetings (JMM). Under the 1993 Agreement, the energy and environment ministers also created a new co-ordinating committee known as the National Air Issues Co-ordinating Committee (NAICC). Comprising assistant deputy ministers from environment and energy departments, it is the main venue for co-operating on and co-ordinating government activities related to air issues in Canada.
1995	The CCME endorses the recommendations of its task force on Cleaner Vehicles and Fuels to reduce pollution from automobiles through more stringent national fuel and emission standards. Provincial programs of vehicle inspection and maintenance are also endorsed.
1997	Under the auspices of the NAICC, a working group is tasked with delivering the second phase of a national smog program to the JMM in 1997. However, the JMM does not address the draft plan developed by the working group because there is no consensus on national actions to be taken. The federal government goes ahead on its own and develops the Phase 2 Federal Smog Management Plan, which is not a federal-provincial plan as originally intended. This federal document reports on federal progress under the 1990 Plan, highlights the latest scientific research and outlines next steps for federal departments. Some initiatives under the 1997 federal plan address particulate matter (PM) in addition to NOx and VOC (hence the use of the broader term "smog" as opposed to just NOx and VOC). The 1996 NOx/VOC Science Assessment is published. It draws together (for the first time in Canada) all aspects of scientific knowledge related to ozone and identifies gaps in that knowledge. Canada and the United States sign an agreement signalling their intent to develop a Joint Plan of Action for Addressing Transboundary Air Pollution. The intent is to eventually develop an annex to the 1991 Canada–U.S. Air Quality Agreement that will deal with ozone.
1998	Signature of the Canada-Wide Accord on Environmental Harmonization by the CCME (with the exception of Quebec). A key element of the Accord is a sub-agreement on Canada-Wide Standards. This sub-agreement is intended to provide a framework for federal and provincial/territorial environment ministers to work together on key issues of environmental protection and health-risk reduction that require standards applicable across the country. Environment Canada and Health Canada begin to work with the provinces and territories to establish Canada-Wide Standards (CWS) for key air pollutants, including ozone and particulate matter. The federal-provincial Working Group on Air Quality Objectives and Guidelines develops assessments that provide the scientific basis for some of the air-related Canada-Wide Standards.
1999	Proposed Canada-Wide Standards for Particulate Matter and Ozone are accepted in principle by the CCME, except Quebec. The proposed standards call for a numeric limit on concentrations of these pollutants in outdoor air and a timetable for achieving the limit. The targets are to be achieved through workplans developed and delivered by each jurisdiction (see Appendix A for further information on the CWS). Relevant federal departments outline the federal government's proposed contribution toward achieving the Canada-Wide Standards for Particulate Matter and Ozone. When finalized, the Phase 3 Federal Smog Management Plan will constitute that contribution.
2000	Canada commences negotiations with the United States on a special annex to the 1991 Canada–U.S. Air Quality Agreement that will address ozone. The principle objective of the annex is to reduce the transboundary flow of ozone and the pollutants that lead to its formation.

and Agriculture and Agri-Food Canada. Appendix F outlines some of the federal activities aimed at reducing smog.

Federal powers and legislation for reducing smog

4.128 Like the provinces and territories, the federal government has certain powers that it can use to address the smog problem. In addition to its taxation and spending powers, it has jurisdiction over international and interprovincial affairs, criminal law, aeronautics, navigation and shipping, railways, coastal waters, harbours and international and interprovincial trade and commerce. It exercises control over federal sources of smog-causing emissions and has the general power under the Constitution to make laws for the "peace, order and good government of Canada."

4.129 The key legislation that authorizes the federal government to take action on smog is the *Canadian Environmental Protection Act (CEPA)*, administered by Environment Canada (jointly with Health Canada in some instances). The *CEPA* gives the federal Minister of the Environment the authority to conduct research, collect data and establish national objectives, guidelines and codes of practice to protect the environment. It also authorizes the federal government to regulate the content and physical properties of fuels as well as air pollution from federal operations and federal lands.

4.130 The legislation also provides general authority for the government to control the release and production of polluting substances. However, that authority is restricted to substances that have first been declared toxic under the legislation. To date, neither ozone nor particulate matter has been added to the List of Toxic Substances under the *CEPA*. However, the federal government has declared toxic a select number of volatile organic compounds that are implicated in smog. Particulate matter (PM) has been evaluated through an assessment under the *CEPA*, and a final declaration on its toxicity is expected midway through 2000. If PM 10 (particulate matter less than 10 microns in diameter) is formally declared toxic, Environment Canada says it will develop an approach to control it and the pollutants that are involved in its formation, namely SO_2, NOx, VOC and ammonia.

4.131 In cases where air pollution generated in Canada causes pollution in another country or violates the terms of an international agreement, the *CEPA* also empowers the federal government to take steps to control the sources.

4.132 Recent changes to the *CEPA* have expanded the federal government's authority to regulate fuels and given it new authority to regulate emissions from off-road engines, such as diesel engines used in construction and farm machinery.

4.133 Since 1971, Transport Canada has played a key role in reducing smog-causing emissions from new cars and trucks through emission standards and other measures established under the federal *Motor Vehicle Safety Act*. With the recent revisions to the *CEPA*, responsibility for limiting vehicle emissions has moved from Transport Canada to Environment Canada.

4.134 Other federal laws that are relevant to the federal government's management of this issue include the *Department of the Environment Act*, the *Department of Health Act*, the *Energy Efficiency Act*, the *Canadian Environmental Assessment Act*, the *Aeronautics Act*, the *Canada Shipping Act* and the *Canada Transportation Act*.

Having a broad range of tools is important

4.135 The federal government has identified the importance of using a broad range of tools in delivering its mandate to protect public health and the environment

The federal government has relied mainly on voluntary mechanisms and co-operation, and has made selective use of only a few regulatory instruments for reducing smog.

from smog. It has stated its intent to achieve its goals through a combination of legislation, regulation, voluntary initiatives and economic instruments. In the 1990 NOx/VOC Management Plan, the CCME endorsed considering the full range of policy instruments. The Comprehensive Air Quality Management Framework for Canada, signed by federal/provincial/territorial energy and environment ministers in 1993, sets out principles of co-operation for the development of plans and strategies to deal with air quality. These include voluntary action, economic measures (including incentives) and public education.

4.136 Despite the recognized need for a broad and comprehensive tool kit, the federal approach has relied for the most part on voluntary mechanisms and the co-operation of provinces, territories and industry, particularly for stationary or point sources of smog-causing pollutants (see paragraph 4.69 for definitions). Limited use has been made of economic instruments. Moreover, the federal government has made selective use of only a few regulatory instruments for reducing smog (see Exhibit 4.13). For example, there are no regulations to control smog-causing emissions from federal operations and federal lands.

Voluntary initiatives — a major element in the 1990 Plan

4.137 Under the 1990 NOx/VOC Management Plan, Environment Canada participated in two different types of voluntary "national pollution prevention" initiatives to reduce emissions of smog-causing pollutants. It co-ordinated the development of non-binding national guidelines or codes of practice to be adopted and implemented by others. It also facilitated the development of voluntary agreements or reduction plans with manufacturers' associations and industry to reduce smog-causing emissions from their products or operations. The CCME sponsored the development of the national guidelines and codes of practice.

4.138 **Environmental guidelines and codes of practice.** Environment Canada led the development of 17 national guidelines and codes of practice, with federal, provincial and territorial co-operation and the involvement of interested stakeholders. These instruments are essentially advisory (non-binding) documents that outline minimum acceptable national guidelines or approaches for controlling NOx and VOC emissions. They provide a basis for establishing consistent control measures and operating practices across Canada. In most cases they apply only to new sources of emissions, not existing sources. These instruments also provide a useful benchmark for environmental assessments and environmental audits.

4.139 The initiatives take a variety of forms and address a number of different sectors and sources of smog-causing emissions (see Exhibit 4.14).

4.140 **Implementation by others required.** While the national guidance documents have been developed under federal leadership, it is important to note that these initiatives depend on others for implementation, usually the provincial/territorial governments. Actual reductions in emissions are achieved only if these jurisdictions adopt and implement the codes or guidelines — for example, through air quality regulations or as binding requirements in operating permits. In certain situations, implementation also depends on the adoption of the guidelines and codes by the federal government for its own operations or lands; and adoption by municipalities, specific industries, facility operators and equipment manufacturers or suppliers.

4.141 Environment Canada periodically reviews the national guidelines and codes to ensure that they are still current. However, no systematic monitoring is

Exhibit 4.13

Federal Regulations to Control Smog

Administered by Environment Canada

The Canadian Environmental Protection Act (CEPA)

Fuel regulations

- Diesel Fuel Regulations (effective 1999) – restrict the sulphur content of diesel fuel used for on-road vehicles (does not include diesel for marine, railway and off-road uses).
- Fuels Information Regulations (pre-date 1978) – require fuel producers and importers to report information on the sulphur content and the types of additives in liquid fuels such as gasoline, diesel and heavy fuel oil.
- Sulphur in Gasoline Regulations – (first phase of reductions required by 2002) limit the sulphur content of gasoline produced or imported into Canada.

Toxic Substances

- Benzene in Gasoline Regulations (effective 1999) – limit the benzene content in gasoline to no more than 1 percent by volume. Benzene is a volatile organic compound (VOC) considered to be toxic as defined under the *CEPA*. This measure was expected to reduce benzene emissions from all gas-powered vehicles by 15 percent.
- Gasoline Dispensing Regulations (effective in 2001) – regulate the flow rate of gasoline during fill-ups at the gas pump in order to reduce vapour emissions of benzene. This will yield reductions in vapour emissions of other VOC in gasoline as well.

Administered by Transport Canada

Road motor vehicle emissions – regulations under the *Motor Vehicle Safety Act*

- Set limits on specific pollutants in motor vehicle exhaust of new vehicles produced in or imported into Canada (amended in 1997).
- Impose a number of other requirements on vehicle manufacturers and importers – for example, requiring the installation of diagnostic systems to monitor the functioning of emission control equipment on vehicles.

(Note: With the recent amendments to the *CEPA*, regulatory authority over motor vehicle emissions has been transferred to Environment Canada from Transport Canada. Canadian emission control standards for vehicles are now fully harmonized with those of the United States, meaning that Canadian and American standards are identical.)

Marine emissions – air pollution regulations under the *Canada Shipping Act*

- Prohibit heavy smoke emissions from ships within one mile of shore (1964).

Aircraft emissions – regulations under the *Aeronautics Act*

- Establish air emission standards for certain types of new aircraft engines made in or imported into Canada (designed to limit emissions during take-off and landing) (1991).

Administered by Natural Resources Canada

Energy efficiency – regulations under the *Energy Efficiency Act*

- Establish national performance standards for energy-using products such as household appliances and heating and cooling equipment (beginning in 1995).

Note: Many of the more recent federal regulations arose as a result of several initiatives – the 1990 NOx/VOC Management Plan, the 1997 Phase 2 Federal Smog Management Plan and the 1995 CCME Cleaner Vehicles and Fuels Program.

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undertaken to determine whether the measures are being adopted and are leading to actual reductions.

4.142 Voluntary agreements and reduction plans. Under the 1990 NOx/VOC Management Plan, the federal government led the development of three initiatives to encourage manufacturers and industry to reduce smog-causing emissions. One is an agreement between Environment Canada and the Railway Association of Canada that sets a cap on total NOx emissions from locomotive engines. The other two are reduction plans that call on manufacturers of adhesives, sealants and consumer paints to voluntarily reduce the amount of VOC in their products.

4.143 There are other examples of federal voluntary arrangements that promote smog reduction:

- the voluntary arrangement on motor vehicle fuel efficiency between the federal government and the motor vehicle industry (managed jointly by Transport Canada and Natural Resources Canada);

- government/industry pollution prevention agreements. While not directed specifically at smog, these were agreements to reduce emissions of toxic substances, some of which are volatile organic compounds and play a role in smog formation. They include agreements with the printing and graphics industry and automotive manufacturers. At present, only Environment Canada and the Ontario Ministry of the Environment are involved; and

- Environment Canada's new memoranda of understanding (MOUs) with manufacturers of "off-road" engines.

New national initiatives needed to reduce smog

4.144 Although 10 years have passed since the approval of the 1990 NOx/VOC Management Plan, the federal government acknowledges that it still needs to develop and lead further initiatives to combat smog. It plans to address emissions from a wide variety of significant sources, including consumer products, paints and solvents, residential wood heating, off-road engines, steel and chemical manufacturing, as well as the base metals, pulp and paper, lumber and wood products industries. In addition, the federal government has acknowledged that fuel standards and vehicle standards go hand in hand. In some cases, vehicle technology used to lower vehicle emissions requires

Exhibit 4.14

Environmental Guidelines and Codes Developed Under the 1990 NOx/VOC Management Plan

- Three CCME-endorsed national air emission guidelines recommending NOx emission targets for stationary sources such as boilers and heaters, stationary combustion turbines and cement kilns.
- Twelve CCME-endorsed environmental codes of practice and guidelines that outline a series of recommended environmental management practices and procedures, as well as equipment and operating standards to reduce VOC emissions from certain activities or operations. In some cases, they may contain suggested targets for VOC emissions. The stationary sources include releases from above-ground storage tanks, dry-cleaning operations, commercial and industrial printing, plastics processing, auto body repair shops, gasoline distribution networks and vehicle refueling. One guideline addresses mobile sources of NOx and VOC: the Environmental Code of Practice for Light Duty Motor Vehicle Emissions Inspection and Maintenance Programs.
- One non-binding product "standard" endorsed by the CCME for paints and other related products used exclusively by auto body repair shops (focusses on the VOC content of these products).
- One *Canadian Environmental Protection Act (CEPA)* national air emissions guideline for electric utilities fired by fossil fuels (for NOx, PM and SO2 emissions).

CCME: Canadian Council of Ministers of the Environment undertaken to determine whether the measures are being adopted and are leading to actual reductions.

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- **One *Canadian Environmental Protection Act (CEPA)* national air emissions guideline for electric utilities fired by fossil fuels (for NOx, PM and SO2 emissions).**

CCME: Canadian Council of Ministers of the Environment low-sulphur fuels. The government intends to pursue new initiatives in the fuels sector through a comprehensive strategy to improve fuel quality. The strategy is to be worked out with stakeholders over the next decade. Clearly, much remains to be done to develop a comprehensive federal approach that will fully address the sources of smog-related pollutants.

Implementation of the 1990 NOx/VOC Management Plan

4.145 Because the federal government cannot solve Canada's smog problem on its own, it has entered into partnerships or collaborative arrangements with the provinces and territories to address the problem. We audited the federal government's role in implementing its key partnership arrangement, the 1990 NOx/VOC Management Plan. The Plan was intended to fully resolve Canada's ozone problems by 2005. Ten years after introducing the Plan, the federal government acknowledges that progress has been slower than planned and the target date will likely not be met. We examined key aspects of the federal government's management of its own initiatives under the Plan and its broader role of providing national leadership. Part III of this chapter summarizes our audit findings.

Much remains to be done to develop a comprehensive federal approach.

PART III — AUDIT OBSERVATIONS AND RECOMMENDATION

Introduction

4.146 The previous Minister of the Environment committed Environment Canada to improving significantly the quality of Canada's environment. This included improving the quality of our air, where science says the risks to human and ecological health are great. Clean air has been designated as an urgent and high-priority issue for the Department.

4.147 The federal government has acknowledged that national progress in combating smog has been slower than planned, and much more remains to be done. The most compelling reason for a federal role in managing smog is the mandate shared by Health Canada and Environment Canada to protect the health of Canadians from risks in the environment. The federal government sees its role as providing national leadership, co-ordination and facilitation in tackling Canada's smog problem. In the federal government, Environment Canada has the lead responsibility for maintaining and enhancing Canada's air quality, a responsibility it shares with Transport Canada, Health Canada, Agriculture and Agri-Food Canada and Natural Resources Canada.

The 1990 NOx/VOC Management Plan set out a broad, three-phased national approach aimed at "fully resolving ground-level ozone problems in Canada by the year 2005."

4.148 Because responsibility for dealing with smog is not confined to its own jurisdiction, the federal government cannot solve Canada's smog problem on its own. In addition to pursuing actions within its own authority, Environment Canada has to work with other federal departments, other Canadian jurisdictions and the United States. In 1990 the federal government chose to enter into a partnership with the provinces and territories to reduce smog.

The 1990 NOx/VOC Management Plan

4.149 The Canadian Council of Ministers of the Environment (CCME) is an intergovernmental forum for discussion and joint action on environmental concerns that cross jurisdictions. Its members, the federal, provincial and territorial ministers of the environment, meet to discuss national priorities for the environment and to determine the work to be carried out under their auspices. (See paragraph 4.123 for additional information on the CCME.)

4.150 Recognizing the seriousness of the ozone problem, the CCME decided in October 1988 to request the development of a national management plan for the control of nitrogen oxides (NOx) and volatile organic compounds (VOC), the air pollutants that lead to the formation of ozone. A federal-provincial steering committee reporting to the CCME developed the 1990 NOx/VOC Management Plan.

4.151 The committee consulted widely with governments, industry and non-governmental organizations to prepare the 1990 Plan. The CCME endorsed the Plan by consensus at its annual meeting in November 1990. The federal, provincial and municipal governments would implement the Plan, with each accountable for its own performance.

4.152 The 1990 Plan set out a broad national approach and outlined the first of three phases aimed at "fully resolving ground-level ozone problems in Canada by the year 2005." According to the Plan, this would require that by 2005 all areas of Canada would consistently attain the national air quality objective for ozone, 82 parts per billion (ppb). The Plan recognized that regional targets for reducing emissions, to be developed under the first phase, would not be stringent enough to fully resolve ozone problems. The second and third phases were to set final targets or caps and develop additional remedial measures (see Exhibit 4.15).

4.153 Phase 1 of the 1990 Plan contained a "base" set of 31 specific initiatives to reduce emissions under the national prevention program. There was also an "illustrative" set of 27 regional initiatives that the other jurisdictions could use in designing remedial programs for areas with major ozone problems. The Plan identified three ozone problem (or "non-attainment") areas: the lower Fraser Valley (British Columbia), the Windsor–Quebec City Corridor (Ontario and Quebec) and the Southern Atlantic Region (particularly Bay of Fundy and Saint John areas).

4.154 There were also 24 study initiatives aimed at generating the additional information needed to set final caps on emissions, design additional emission control programs and track progress toward the interim reduction targets. The Canadian NOx/VOC Science Assessment, published in 1997, provided a major contribution to scientific knowledge about ozone and particulate matter. The results set the stage for ongoing research on smog, and identified the importance of controlling particulate matter as well as NOx and VOC. Thus, while the 1990 Plan focussed only on controlling NOx and VOC, it was clear that future plans would have to address the emerging problem of particulate matter.

Future plans would have to address the emerging problem of particulate matter.

Ambient monitoring of air pollutants

4.155 **Canada's current national air quality objectives.** Since the 1970s, Canada has had national air quality objectives that seek to protect human health, crops and forests by specifying target levels for several air pollutants. They are designed to provide a degree of protection while considering other factors such as the social, economic, and technological feasibility of reducing pollution.

4.156 In Canada, air quality objectives are established under federal, provincial and territorial legislation. Federal legislation sets national air quality objectives for levels of five common pollutants in outdoor air (ozone, total suspended particulates, carbon monoxide, sulphur dioxide and nitrogen dioxide). Each objective represents an air

Exhibit 4.15

Three Phases of the 1990 NOx/VOC Management Plan

Phase 1 (1990–1994)	• Establish a strong national prevention program to address new mobile and new stationary sources of emissions, and improve public education. • Set interim targets for reductions in NOx and VOC emissions for 1995 and 2005 in designated ozone problem areas, to be negotiated between the federal government and the jurisdictions involved. Develop regional remedial programs to reach those targets. • Conduct studies and investigations to provide the base for establishing final caps on NOx and VOC emissions in ozone problem areas for 2000 and 2005.
Phase 2 (1994–1997)	• Establish final caps on NOx and VOC emissions in designated ozone problem areas for the years 2000 and 2005, with the 2005 targets selected to meet the 82 ppb objective for ozone. • Identify additional remedial measures for ozone problem areas and, if appropriate, extend or tighten the prevention program to achieve the 2000 and 2005 caps.
Phase 3 (1997–2005)	• Make final adjustments to the emission caps and reduction programs in the ozone problem areas.

management target for concentration of the pollutant in the air at given lengths of exposure. The national objectives are long-term goals, intended only as guidance for the management of air quality. They are not prescriptive or legally binding on the jurisdictions and are not enforceable by law, unless incorporated into regulated standards or facility permits.

4.157 Provinces and territories can set objectives or legally enforceable standards under their own legislation that may be more stringent than the national objectives. Or they may set none at all. In many cases, provincial objectives are based on the national objectives. But in other cases, provinces develop their own objectives based on their own assessments of relevant factors.

4.158 When the 1990 NOx/VOC Management Plan was developed, federal air pollution strategies were based on the belief that there was a safe lower limit on the levels of pollutants that make up smog. However, new evidence has been unable to identify a level at which the main pollutants in smog — ozone and particulate matter — have no effect on human health.

4.159 **National tracking system.** A national tracking system follows Canada's progress in improving its air quality under the 1990 NOx/VOC Management Plan. It involves monitoring outdoor air quality; developing inventories of pollutant emissions — sulphur dioxide (SO_2), nitrogen oxides (NOx), volatile organic compounds (VOC) and particulate matter (PM); mathematical modelling of reduction scenarios, using complex computer programs; and forecasting levels of these same pollutants. The information gained from tracking can be fed back into science, policy and program delivery. For example, it can be used to identify trends and assess whether control measures are having the intended results.

4.160 Monitoring of outdoor air provides an important indication of the state of the environment in a geographic area. Concentrations of pollutants measured at monitoring sites across Canada can be compared with established air quality standards or objectives to indicate the general quality of the surrounding atmosphere. The levels of pollution in the air also indicate whether any adverse human health effects can be expected.

4.161 Environment Canada and Health Canada have worked with the provinces and territories to establish new numeric Canada-Wide Standards for outdoor concentrations of key air pollutants, such as ozone and particulate matter. These new standards will replace the current national air quality objectives.

Focus of the audit

4.162 Environmental issues are complex, affecting many aspects of Canadian life. No one jurisdiction has authority over all environmental concerns. The federal and provincial/territorial governments each have certain powers to regulate matters within their own domains.

4.163 Our audit focussed on the federal role in Canada's national smog-reduction program, the 1990 NOx/VOC Management Plan. The Plan was developed as the cornerstone of the federal government's response to Canada's smog problem. We examined the way the Plan has evolved over the past 10 years. We audited key aspects of the federal government's management of its own initiatives under this domestic program, as well as its broader role of providing national leadership. Our audit work was restricted to the federal roles and responsibilities — in particular, those of Environment Canada, the federal leader on air quality issues.

4.164 Our audit concentrated on how the 1990 Plan was implemented. We asked some fundamental questions about the Plan:

- Did it provide sound strategic direction?
- Were basic management principles applied in implementing it, including establishing a governing framework with clear accountability for specific results and providing transparent information to the public and Parliament?
- Did the federal government do what it promised to do?
- Was the Plan implemented as intended, and is the achievement of the overall goal in sight?

4.165 We did not audit the development of the proposed new standards for particulate matter and ozone under the Canada-Wide Standards process. However, we do describe the process in Appendix A.

4.166 We examined the roles and responsibilities for national monitoring of smog-causing pollutants in ambient (outdoor) air. Ambient air monitoring is viewed as the best means of tracking Canada's progress under the 1990 Plan.

4.167 Further details on our audit objectives, scope and approach can be found at the end of the chapter in the section **About the Audit**.

Observations

Implementation of the 1990 NOx/VOC Management Plan

The 1990 Plan provided sound strategic direction

4.168 Planning entails several stages at increasing levels of detail. At the initial stage, it is important to outline a strategic direction. For example, a plan should initially identify the desired goals and objectives, describe the general approach to be followed and establish timetables. It should also identify the risks that must be addressed and the governing framework needed. This includes outlining the roles and responsibilities of the parties involved and the actions they plan to take.

4.169 The 1990 NOx/VOC Management Plan identified the nature of the health and environmental risks associated with ozone and the need to resolve this serious problem. It also identified an ultimate goal (consistent attainment of the national air quality objective for ozone — 82 ppb in all areas of Canada) and a general approach with a specific date for attaining that goal (by 2005).

4.170 The Plan recognized the need for a governing framework that would include systems for monitoring, review and adjustment, and reporting. Phases 2 and 3 were to provide an opportunity for major midcourse corrections, if necessary. The Plan indicated when those phases were to be developed. It acknowledged the importance of having a broad range of measures for the federal, provincial and territorial governments to use. It also provided a comprehensive menu of possible solutions, based on what was known about smog at the time.

4.171 In our opinion, developing the 1990 Plan represented a major achievement by the federal, provincial and territorial governments. The Plan provided sound strategic direction and was an excellent first step in the process that would be required to fully address Canada's smog problem.

The 1990 Plan provided sound strategic direction and was an excellent first step.

No agreement on a governing framework

4.172 Once partners in a joint undertaking establish a strategic direction, it is important that they agree on a governing framework for implementation. In developing our expectations for such a framework, we drew on Collaborative Arrangements: Issues for the Federal Government (Auditor General's

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April 1999 Report, Chapter 5) and Involving Others in Governing: Accountability at Risk (Auditor General's November 1999 Report, Chapter 23). Exhibit 4.16 sets out the key features of a governing framework.

When the proposed federal-provincial agreements failed to materialize, the 1990 Plan was destined to fail.

4.173 We found that the partners in the 1990 NOx/VOC Management Plan agreed on the details of only a few of these elements. They broadly identified roles and responsibilities and agreed on some national performance expectations for the size of reductions in NOx and VOC levels and peak ozone levels to be achieved by 2005. However, the federal government did not clearly define the nature of its leadership role in facilitating development of national strategies and regional remedial programs.

4.174 If a governing framework is to be effective, in our opinion, detailed agreements must be signed in the early stages of the implementation process. The agreements must specify who will do what by when, what results are expected, and what will be the consequences of non-performance by the partners.

4.175 The CCME ministers agreed to negotiate federal-provincial agreements by November 1991. The agreements were to provide details of the prevention, remedial and study programs, as well as the specific responsibilities and commitments of each jurisdiction. The agreements were also to define the interim reduction targets. Discussions began but, in the end, there was no formal negotiation of agreements.

4.176 In the absence of signed agreements, the federal and provincial governments never formally set out their prevention, remedial and study programs, their specific responsibilities, or their commitments to implement the Plan and the consequences of non-performance. Because interim reduction targets for the three ozone problem areas were never set out, there were no milestones or benchmarks by which to assess progress over time toward the ultimate goal. In our opinion, when the proposed federal-provincial agreements failed to materialize by November 1991, the 1990 Plan was destined to fail.

4.177 In the Plan, the ministers also agreed to establish and maintain a system to track all prevention and study initiatives and their progress. However, there was no agreement on the specific means of monitoring and reviewing all three phases. The federal government has continually acknowledged the need for such a system but has yet to develop one.

Exhibit 4.16

Key Features of a Governing Framework for Collaborative Arrangements

A governing framework should include:

- Jurisdictional commitments, with clear roles and responsibilities identified for each party to the arrangement.
- The specific contributions each party is to make, including co-ordination with each other, and priorities and completion dates for individual initiatives.
- Performance expectations – the results to be achieved.
- Benchmarks (interim and final targets for concrete results) against which to assess interim progress in the years preceding the final target date.
- A monitoring system for ongoing systematic tracking of achievements so that the contribution and performance of each partner can be assessed, as well as the performance of the partnership overall.
- A system of review and adjustment, as required, to achieve the targets.
- A contingency plan for major midcourse corrections, if required.
- Mechanisms for credible and timely reporting to the public and Parliament on performance (activities and results), including provision of transparent information.

April 1999 Report, Chapter 5) and Involving Others in Governing: Accountability at Risk (Auditor General's November 1999 Report, Chapter 23). Exhibit 4.16 sets out the key features of a governing framework.

When the proposed federal-provincial agreements failed to materialize, the 1990 Plan was destined to fail.

4.173 We found that the partners in the 1990 NOx/VOC Management Plan agreed on the details of only a few of these elements. They broadly identified roles and responsibilities and agreed on some national performance expectations for the size of reductions in NOx and VOC levels and peak ozone levels to be achieved by 2005. However, the federal government did not clearly define the nature of its leadership role in facilitating development of national strategies and regional remedial programs.

4.174 If a governing framework is to be effective, in our opinion, detailed agreements must be signed in the early stages of the implementation process. The agreements must specify who will do what by when, what results are expected, and what will be the consequences of non-performance by the partners.

4.175 The CCME ministers agreed to negotiate federal-provincial agreements by November 1991. The agreements were to provide details of the prevention, remedial and study programs, as well as the specific responsibilities and commitments of each jurisdiction. The agreements were also to define the interim reduction targets. Discussions began but, in the end, there was no formal negotiation of agreements.

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Without it, the government cannot say to what extent the partnerships' activities are reducing smog, or whether corrective action will be needed to reach the goal of the Plan.

4.178 The 1990 Plan also recognized the need for continuous public access to information on the status of all initiatives and programs, and for annual reporting to the CCME. However, no agreement was reached on responsibilities for reporting or exactly how the public would be kept informed over the life of the Plan.

4.179 The 1990 NOx/VOC Management Plan recognized that the basic elements of a governing framework needed to be in place if the Plan were to be implemented successfully. Although the governments knew what had to be done, in the early stages of implementation they did not agree on the details of the governing framework to be used, and many of the key elements were never put in place.

Accountability is diffused

4.180 Accountability is the obligation to demonstrate and take responsibility for performance in light of agreed expectations. Clearly stated performance expectations are part of a governing framework. Despite the identified need for strong, regionally targeted remediation programs to achieve the goal, the provinces never agreed on the specific contributions they would make. The federal government identified the activities it would complete under the 1990 Plan but not the specific reductions in smog levels it expected to achieve as a result.

4.181 As already noted, although the CCME endorsed and led the 1990 Plan, it cannot cause the federal government, provinces, territories or municipalities to take action. Its role is limited to co-ordination and facilitation. Governments are accountable for implementing the Plan, with each jurisdiction deciding whether or not to adopt proposals that governments have agreed to through the CCME.

4.182 We found that an appropriate accountability regime for the 1990 Plan was never put in place to clarify the roles, responsibilities and expected performance of each level of government. It was thus unclear whom the public and Parliament could hold to account should the Plan fail.

Without an appropriate accountability regime, it was unclear whom the public and Parliament could hold to account should the Plan fail.

The 1990 NOx/VOC Management Plan was never implemented as originally envisioned

4.183 The federal government delivered its own initiatives. The 1990 NOx/VOC Management Plan outlined the initiatives the federal government would undertake in areas clearly under its jurisdiction. The government indicated where it planned to take the lead, and it led many of the National Prevention Initiatives. The federal government delivered most of the activities it was responsible for under these initiatives.

4.184 The National Prevention Initiatives had two parts. The federal government was responsible for the first part — to develop performance standards for new emission sources, measures to control VOC emissions from products, and energy conservation and efficiency measures. The government accomplished this mainly by developing national codes and guidelines. These are essentially advisory documents that outline minimum acceptable national guidelines or approaches for controlling NOx and VOC emissions from a variety of sources (discussed in Exhibit 4.14). The second part of the national initiatives required the responsible parties (the federal government, provinces, territories, municipalities or industry) to implement the new codes and guidelines and thereby actually reduce emissions.

4.185 Public awareness is still needed. All Canadians have a role to play in solving Canada's smog problem. People need to be aware of how their actions contribute to smog and how they can make choices that cause less air pollution. Under the National Prevention Initiatives, the federal government took the lead in delivering four public awareness initiatives to influence consumer choice and lifestyle. In a progress report to the CCME in 1994 and again in the 1997 Phase 2 Federal Smog Management Plan, the government stated that work was continuing on all four of the initiatives. The most recent draft of the Phase 3 Federal Smog Management Plan also recognizes that more public education is needed because it remains vital to the success of smog-reduction measures.

4.186 The federal government also carried out several studies and investigations under the 1990 NOx/VOC Management Plan. This included leading a major science assessment, published in 1997.

The phased approach did not unfold as planned.

4.187 A need for future phases. When the 1990 NOx/VOC Management Plan was initiated, the National Prevention Initiatives were not in themselves expected to significantly reduce ozone levels in Canada. The Plan focussed on establishing national prevention measures to protect regions with "clean" air from deterioration and to provide a basis for targeting remediation programs where they were needed. To develop the governing framework and successfully implement the 1990 Plan, phases 2 and 3 had to be completed. However, the phased approach did not unfold as planned.

4.188 Phase 2 was not developed as originally envisioned. In the early 1990s, it became evident that air issues were not a matter for the environment ministers alone, and could not be addressed effectively in isolation. Since 1993, federal and provincial/territorial ministries of the environment and of energy have co-ordinated their work on air issues, primarily through joint meetings of the CCME and the Council of Energy Ministers. These meetings are referred to as Joint Ministers Meetings (JMM).

4.189 Phase 2 was to be produced in 1994 as a continuation of the 1990 Plan. It was to comprise several provincial plans and a federal-provincial plan. However, its development was delayed. A working group was tasked with delivering a national smog management plan to the JMM in 1997. But the JMM did not address the draft plan that was developed. The original concept for Phase 2 ultimately fell apart and, instead, the working group presented a *Status Report and Next Steps on Smog in Canada* to the November 1997 JMM. The report outlined the actions the parties had taken so far but it failed to link the results of those actions to the goal of resolving ozone problems by 2005.

4.190 The federal government then developed the Phase 2 Federal Smog Management Plan on its own. The Phase 2 Plan was sponsored by the departments of environment, natural resources and transport. They completed it in November 1997, three years behind the schedule envisioned in the 1990 Plan. Because it was not a federal-provincial plan, potential synergies of joint efforts were lost.

4.191 The Phase 2 Federal Smog Management Plan built on the National Prevention Initiatives in the 1990 NOx/VOC Management Plan. New information from research undertaken during Phase 1 led to plans for specific federal initiatives under Phase 2. These initiatives were to address not only ozone precursors (NOx and VOC) but also particulate matter, which had emerged as a significant part of the smog problem.

Only modest national reductions in NOx and VOC could be expected as a result of the federal activities.

4.192 The 1997 Phase 2 Federal Smog Management Plan stated that even if it were implemented fully, only modest national reductions in NOx and VOC could be expected as a result of the federal activities. The Phase 2 Plan noted that while federal actions would help to reduce smog nationally, focussed regional programs of remediation were still needed to reduce smog in areas of poor air quality. The Phase 2 Plan did not show how the reduction targets it identified were directly related to achieving Canada's ozone objective; and it included a new target date of 2010 for reducing emissions.

4.193 Phase 3 is still being developed. The 1990 NOx/VOC Management Plan called for a third and final phase in 1997 to ensure that the national goal would be achieved. The original three-phase process of the 1990 Plan has evolved since then. The development of the Canada-Wide Accord on Environmental Harmonization and its Canada-Wide Environmental Standards Sub-Agreement in 1998 led to proposed new Canada-Wide Standards for Particulate Matter and Ozone (see Appendix A). The federal government plans in 2000 to produce a third phase of the 1990 Plan, to set out its contribution toward achieving the Canada-Wide Standards.

4.194 Provincial plans did not unfold as envisioned. As already discussed, there are no federal-provincial agreements for implementing the 1990 Plan. Two of the provinces did publish provincial smog management plans (British Columbia/ Greater Vancouver Regional District in 1994 and Ontario in 1998). As our audit responsibilities are limited to the federal government, we did not examine the results of the two provincial plans. However, we found that they have different goals and it is difficult to identify how their proposed reductions are linked to achievement of the original goal for 2005.

Transparent information is essential

4.195 A governing framework for a partnership arrangement needs to have mechanisms for credible and timely reporting on performance, including reporting as each key phase or milestone is reached. This includes providing information on activities and results. A national program like smog should provide for keeping the respective legislative bodies and the public informed. Parliament ought to be provided with transparent information to scrutinize federal smog-reduction efforts and to hold the federal government accountable.

4.196 Each partner has a responsibility to provide information to its partners and its own legislature. The public is an important stakeholder in national smog programs. It needs to be actively involved if this problem is to be solved (see Exhibit 4.17). It is the public who will hold their governments to account for

Exhibit 4.17

Importance of an Informed Public

Addressing the smog problem requires an informed public

- **With information, people are better able to make choices that protect their health and reduce their contribution to smog. They are better equipped to take responsibility for their use of energy and transportation. Information also helps them adjust to changes that may be required in their attitudes, lifestyles and behaviour.**
- **An informed public provides a more solid foundation for public debate. Information helps the public better understand and support decisions, policies and actions of governments. Transparent information would help the public to participate actively with governments in managing and resolving the smog problem.**
- **Information helps build a national political consensus on national values and the need for action.**
- **An informed public is the only means of holding jurisdictions jointly accountable, because individual partners cannot be held accountable for the success or failure of the partnership as a whole.**
- **The federal government needs to win public confidence in its handling of the serious smog problem. It needs to be seen by the public as having taken credible action on smog and to show that its action has made a difference.**

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Canada's progress in combating smog, and to do this it needs information. An objective assessment of progress, based on good information, enables the public to compare their governments' stated intentions or goals with what they have actually done.

4.197 To play its role, the public needs ready access to reliable, objective, comprehensive, timely and meaningful information. This would include information on the nature of the smog problem, how the federal government uses partnerships to deliver its mandate, and strategic plans that include the roles and responsibilities of the partners, their goals, and the contribution expected of each. The information would describe the activities of the federal government and its partners in combating smog and the results they have achieved. It would also include projected trends, deviations from plans and progress measured against established benchmarks.

Both the public and Parliament ought to be provided with transparent information.

4.198 The federal government has a responsibility to ensure that all Canadians, including Parliament, are informed about all aspects of the smog problem. We examined its communication to Parliament and the public on the implementation of the 1990 NOx/VOC Management Plan over the last 10 years to see whether it has given them transparent information.

Poor reporting of results to the public and Parliament

4.199 To protect the public interest and enable the public and Parliament to scrutinize smog-reduction efforts, the partners need to agree on a monitoring and reporting regime that specifies who is to provide what information to whom, and when. An appropriate reporting regime would also help the provinces and territories fulfil their own reporting requirements to their own legislatures. When the federal government chooses to deliver its mandate through partnerships, in our opinion it has a responsibility to ensure the implementation of an appropriate reporting regime.

4.200 **Progress reports anticipated but not delivered.** The reporting system for the 1990 NOx/VOC Management Plan was to include continuous public access to information on the status of all the Plan's initiatives and programs. The Plan identified the need for a brief progress report to the CCME in October of each year. That report was to indicate any problem areas and recommend corrective actions. However, we found that only two progress reports had ever been submitted to the ministers — one in October 1994 and one in November 1997. Neither is readily available. The 1997 Phase 2 Federal Smog Management Plan contained some information on progress but only in the form of listed activities. The draft Phase 3 Federal Smog Management Plan provides an update on some activities of the previous phases. Both plans are available on Environment Canada's "Green Lane" on the Internet.

4.201 The "Green Lane" also has a number of sites dealing with various aspects of the smog problem. These sites provide information on the seriousness and complexity of the problem. They refer to the 1990 Plan and various activities under way to combat smog.

4.202 Departmental performance reports and reports on plans and priorities submitted each year to Parliament are other potential sources of performance information. Our review of Environment Canada's documents for the last nine years found that they provide very little useful information about progress toward the original goal of the 1990 Plan, or on reductions the federal government has achieved under the Plan.

4.203 The documents provide only general information on objectives, and they report on activities performed such as studies undertaken and the science assessment that was published. They report the codes and guidelines that were developed rather than the results they achieved in reducing smog levels.

4.204 The documents provide insufficient information about progress. Documents from 1992–93 to 1995–96 reported the 2005 goal but gave no indication of how much further Canada needed to go to meet it. Reports after 1995–96 do not refer to the original goal. Further, while the delays in developing the federal-provincial agreements were reported in 1993–1994, later reports make no mention of the agreements.

4.205 Many of the initiatives under the 1990 Plan involved developing national codes of practice and guidelines. We found that once the CCME had published the codes and guidelines, the federal government reported (in its 1997 Phase 2 Plan) that the initiatives had been completed (see Exhibit 4.18 for examples).

4.206 Developing and agreeing on a national code of practice are just the first steps. The codes and guidelines have to be adopted and followed if NOx and VOC emissions are to be reduced. We found that Environment Canada relies on others to implement the codes and guidelines.

4.207 Although various documents have reported progress in developing codes and guidelines, there is no formal mechanism in place to determine whether the guidelines are followed and reductions achieved. Despite having reported that initiatives were completed, the federal government has no assurance that they have actually reduced smog in Canada. The federal government needs to make a more credible case for the contribution these codes and guidelines have made to addressing the smog problem.

4.208 In summary, we found that the various sources of information provide little information on actual reductions in NOx and VOC achieved by the initiatives, or on progress toward the overall goal. The federal government has not fully outlined the problems it faces in combating smog. For example, it never informed the public and Parliament that the 1990 NOx/VOC Management Plan was "off the rails", that the partnership and its three-phased approach to dealing with the smog problem were not working as envisioned and that the goal was in jeopardy. Moreover, reporting on the 1990

Reporting on the 1990 Plan has been fragmented and difficult to find.

Exhibit 4.18

Examples of Phase 1 Initiatives Identified as Completed in the 1997 Phase 2 Plan

Purpose	Results/Progress
Limit NOx emission from combustion turbines	*National Emission Guidelines for Stationary Turbines* was published by CCME in December 1992.
Reduce tailpipe and evaporative emissions resulting from tampering of vehicle emission control system or poor vehicle maintenance	*Environmental Code of Practice for Light Duty Motor Vehicle Emissions Inspection and Maintenance Programs* was published by CCME in October 1994.
Reduce VOC emissions from new and existing VOC storage tanks	*Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks* was published by CCME in June 1995.
Reduce VOC emissions from organic chemical plants	*Environmental Guideline for the Control of Volatile Organic Compounds Process Emissions from New Organic Chemical Operations* was published by CCME in September 1993.

Plan has been fragmented and difficult for the public to find. In fact, it would be very difficult for the public and Parliament to assess Canada's actual progress in addressing the smog problem.

Co-ordination of Air Pollutant Monitoring

National Air Pollution Surveillance (NAPS) network

4.209 Because smog crosses provincial, territorial and national boundaries, monitoring the pollutants in smog is a federal, provincial and territorial concern. Currently, Environment Canada participates in seven major programs that involve monitoring air pollutants. The largest monitoring network and the one most relevant to smog is the National Air Pollution Surveillance (NAPS) network. Provincial/territorial and municipal agencies operate and maintain most of this network. They gather and validate most of the monitoring data as an integral part of their own activities to control air pollution.

The National Air Pollution Surveillance (NAPS) network, operated by federal, provincial, territorial and municipal agencies, monitors the pollutants in smog.

4.210 Environment Canada provides national co-ordination of these monitoring activities. It processes, validates, compiles and annually publishes national data gathered in monitoring. It maintains a national database with archived data dating back to 1974. It also develops criteria for deciding where to locate monitoring equipment. It runs national quality assurance programs, promotes standards for equipment and methods of measuring, and operates two sampling stations in the National Capital Region. The NAPS network supports both the needs of the provinces and territories and the national NAPS program. Environment Canada provides the major portion of the instruments used in the national NAPS program for monitoring, sampling and calibration, as well as some technical assistance to operate the network. The provinces and territories provide instruments that support their needs and those of the national NAPS program.

4.211 The NAPS network was established in 1969 as a joint program of the federal and provincial governments. Given the concern about human exposure to air pollutants, they saw the need for a network that would provide information to a national database on air quality in the major urban centres.

4.212 Provinces were contemplating building up their own networks for control purposes. The parties agreed to enter measurements from selected representative stations operated by the provinces into a national information database. It was expected that the provinces would operate and maintain the monitoring stations as an integral part of their pollution control activities, and the federal government would be the logical leader to design and co-ordinate this national network.

4.213 The initial priority for the NAPS program was to monitor pollutants for which there were national air quality objectives. Accordingly, Environment Canada has reported on sulphur dioxide, carbon monoxide, nitrogen dioxide, ozone and total suspended particulates. These components of smog are measured at over 152 stations in 55 cities of the 10 provinces and two territories.

4.214 Recent years have seen a number of additional monitoring activities under the NAPS program. For example, in 1984 the NAPS network began to monitor particulate matter. Since 1989, 40 sites have also monitored some volatile organic compounds (VOC). In addition, non-urban sites have been set up to monitor ozone, supplementing NAPS stations in cities.

4.215 The NAPS program obtains hourly data on ozone and NOx. Validated data are later transferred into the federal database. Information on VOC is collected over a 24-hour period and can be obtained as often as resources permit. VOC information must be collected manually and analyzed, and then the data are entered into the database. Information on particulate matter is collected manually and on a continuous basis.

4.216 Data from the NAPS network also support a number of other major national efforts, such as the national acid rain initiatives. The NAPS network recognizes that pollutants other than those currently measured are a concern now, and may be in the future. In addition, the new Canada-Wide Standards for Particulate Matter and Ozone will have a significant influence on the future direction of monitoring outdoor air.

Lack of formal agreement on roles and responsibilities

4.217 Given the importance of the network, we expected that all interested parties would have a written agreement detailing how they would operate, maintain and enhance it. The division of responsibilities among the federal, provincial, territorial and municipal agencies has evolved over the life of the NAPS network. Responsibilities were assigned on a generally informal, ad hoc basis following discussions at regular meetings of a federal/provincial/territorial advisory committee on air quality. Working arrangements arrived at over the years through discussion have become the basis for the network's current operations.

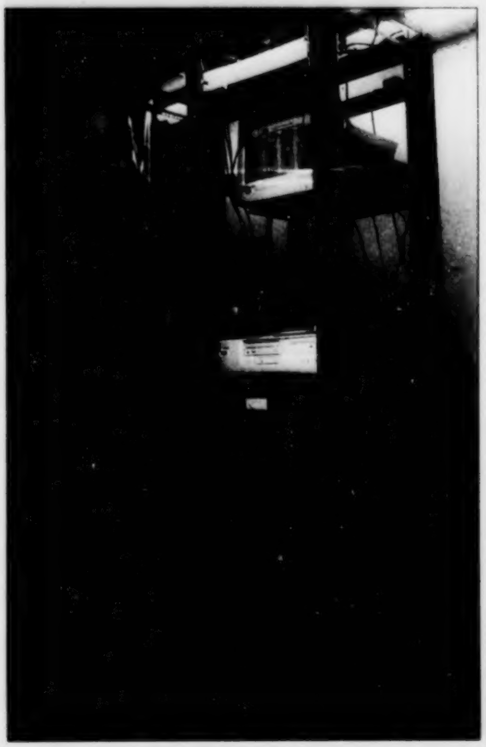
4.218 In our opinion, these informal arrangements have left the network vulnerable to diminishing or unfulfilled commitments by the participating agencies. There have already been delays in gathering data, and gaps in the data that have been reported. The lack of formal arrangements means that the federal government has no way to be assured of a continuous flow of current and complete data on national air quality.

4.219 The federal, provincial and territorial governments recognize this vulnerability. We found that the NAPS program managers recently began to document the NAPS mission statement, fundamental principles, major activities and the roles of Environment Canada and provincial, territorial and municipal governments.

Lack of national direction

4.220 Our review found various documents stating that the federal government was to provide leadership in developing criteria and goals for air quality. It would also provide co-ordination to ensure that provinces collected the same kinds of data. It would assemble and distribute scientific and technical information. Although the parties generally agreed on the federal role, this agreement was never formally documented.

4.221 We expected that in its leadership role the federal government would provide direction on developing the network, identifying current and projected needs (both regional and national) and



Information on air pollutants is gathered by the ambient monitoring network (see paragraph 4.215).

Source: Ontario Ministry of the Environment co-ordinating national resource plans to ensure that these needs could be met. The federal government has provided some strategic direction in fulfilling national monitoring requirements by establishing programs such as the particulate matter and VOC sampling programs. However, our review found no documented and agreed-upon national vision or direction for the NAPS network or priorities for maintaining and enhancing it.

The NAPS network is under considerable strain, including aging instruments.

4.222 Although various documents partly identify the national needs and priorities for monitoring outdoor air, no single document formally defines them. Over the last few years, federal/provincial/territorial committees have published studies indicating the pollutants that should be monitored and the kind of network needed to support this monitoring. For example, the Canadian NOx/VOC Science Assessment (a federal-provincial project) published in 1997 recommended that the responsible agencies maintain and enhance the national monitoring network. It also identified priorities for action and suggested what a national network needed. However, there has been no national approval or adoption of the study recommendations.

Without financial commitment, national direction and formal national agreement on what is needed, the network may not be enhanced or properly maintained.

4.223 The documents Environment Canada provided to us indicate that federal officials have identified significant weaknesses in the present national monitoring system. NAPS program officials have developed plans that include capital replacement and human resource requirements. They have identified the funds required for future needs. For example, Environment Canada has identified the additional monitoring that it believes will be needed to support the new Canada-Wide Standards for Particulate Matter and Ozone.

4.224 Federal NAPS managers have indicated to us, the Department and the other participating agencies that the national monitoring network is under considerable strain. They report that nationally, NAPS instruments are aging and most are well beyond the industry standard lifetime of eight years. They also report that it is difficult to obtain the necessary funding and that program staff are stretched to the limit and have problems handling the existing workload.

4.225 There is no formal federal commitment to future funding to keep the network operating and to avoid "rust-out". For example, when the NAPS network operations required significant additional funding in 1999, NAPS managers had to find the funds from federal sources outside the NAPS program. The federal government indicates that it will need to provide funding of more than $4.2 million in the first year to enhance the network and provide the monitoring capability it believes is needed to support the new Canada-Wide Standards. At the writing of this chapter, this amount had not been formally approved.

4.226 We were informed that when the NAPS network was established, the federal government shared the costs of the network 50-50 with the other participants. The federal government provided the monitoring instruments and the provinces arranged for their operation. Departmental documents indicate that today the other participants are bearing the major portion of the costs of the network.

4.227 A national monitoring system is essential to provide a national picture of air pollution. Without financial commitment, national direction and formal national agreement on what is needed, the network may not be enhanced or properly maintained. This could limit the federal government's ability to fulfil its national monitoring role. A weakening of the national monitoring system could mean that the network would be unable to deal with future demands. In our opinion, the requirements of the national monitoring network need to be addressed as part of the Canada-Wide Standards process.

Proposed Canada-Wide Standards for Particulate Matter and Ozone

4.228 The 2005 target for clean air will likely not be met. The original goal of the 1990 NOx/VOC Management Plan was to consistently attain the national air quality objective for ozone of 82 ppb, (1-hour averaging time) in all areas of Canada by 2005. Since the Plan's introduction, the ozone objective has been regularly exceeded in most of Canada's populated areas. Moreover, new scientific evidence has been unable to identify a level at which ozone or particulate matter has no effect on human health. The federal government acknowledges that the original ozone target date will likely not be met.

4.229 The Canada-Wide Standard proposed for ozone would extend the timeframe for achieving the goal. Canada has not had national objectives for particulate matter. The proposed Canada-Wide Standard for PM 2.5 is 30 micrograms per cubic metre (24-hour averaging time) by 2010. The proposed Standard for ozone is 65 ppb (8-hour averaging time) by 2015. In November 1999, the CCME ministers (with the exception of Quebec) accepted these proposed standards in principle. At their June 2000 meeting they will either endorse them or consider other options for the Canada-Wide Standards for Particulate Matter and Ozone, including alternative timeframes.

4.230 The proposed Canada-Wide Standards recognize that the new air quality targets for ozone and particulate matter cannot protect health fully. The federal government is recommending an incremental approach, with the aim of continuously improving regional air quality by revisiting national standards and programs over time.

4.231 We found similarities in the approaches of the 1990 NOx/VOC Management Plan and the new process for setting and achieving Canada-Wide Standards. Like the 1990 Plan, the Canada-Wide Standards will rely on each jurisdiction's commitment to develop and implement its plan for meeting the proposed standards by a specified date. Like the 1990 Plan, Canada-Wide Standards include a requirement for public reporting. It is intended that the Canada-Wide Standards for Particulate Matter and Ozone will be signed by each environment minister, unlike the 1990 Plan, which the CCME endorsed as a body.

4.232 It remains to be seen whether the new Canada-Wide Standards process will prove more effective at obtaining co-operation among the various levels of government and achieving results. Whether the new process will provide for clear accountability for results and transparent information to the public and Parliament also remains to be seen.

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Conclusion and Recommendation

4.233 Developing the 1990 NOx/VOC Management Plan represented a major achievement by the federal, provincial and territorial governments and provided sound strategic direction. We found that the federal government did most of what it had promised to do under Phase 1 of the 1990 Plan; however, more needs to be done to heighten public awareness. Even though the federal government expected that its contribution to reducing emissions would be modest, the 1990 Plan represented good intentions and the aspects that were completed should make a contribution to Canada's air quality. But the Plan was never implemented as originally envisioned, and this has created an "implementation gap" between strategic planning and the efforts required of the partners to achieve the goal.

The Plan was never implemented as originally envisioned, creating an "implementation gap".

Canada's smog problem is far from being resolved.

It is clear that after 10 years of effort, the partnership model used to implement the 1990 Plan is ineffective.

4.234 When the federal government enters into a partnership to fulfil its responsibilities in an area of shared jurisdiction, it needs to ensure that the basics of good management are applied. However, many of the key elements of good management were never put in place in implementing the 1990 Plan.

4.235 We believe that Environment Canada, as the national leader, is responsible for reporting on not only the federal contribution but also national commitments and the progress of the partnership. However, we found that Canadians have not been given a clear picture of what the federal, provincial and territorial governments are doing about the smog problem. It is not apparent who is to do what and by when. Nor is it clear how much progress they have made so far. This means that the public and Parliament cannot determine whether Canada is moving forward at a reasonable pace to deal with what the federal government has described for the last 10 years as a serious threat to public health and the environment.

4.236 In our opinion, for the public to be involved in solving the smog problem and Parliament to be able to scrutinize federal action, they need transparent information. Periodic public reporting should provide information on the seriousness of the problem and what is being done about it. However, Environment Canada is not providing transparent information about progress.

4.237 Canada is continuing to address the stubborn ozone problem and the new problem of particulate matter through the Canada-Wide Standards process. This process is to include the commitments that jurisdictions will make to specific action against smog. As part of these commitments and to help assess future progress, Canada will need to clarify the direction of its national ambient monitoring network, identify national needs and document the roles and responsibilities for maintaining and enhancing the network.

4.238 Given its responsibility to protect public health from environmental risks, the federal government has a major role in co-ordinating and facilitating integrated national strategies, plans and actions to address the smog problem. This includes choosing federal/provincial/territorial models of collaboration that will achieve the desired results. It is clear that after 10 years of effort, the partnership model used to implement the 1990 NOx/VOC Management Plan is ineffective.

4.239 Environment Canada should learn from its experiences in implementing the 1990 NOx/VOC Management Plan and apply the lessons learned to the next major national strategy for addressing both the chronic ozone problem and the new and serious issue of particulate matter. It should consider incorporating the following key elements of good management:

- **written agreements prepared in the early stages of the implementation process that specify each jurisdiction's roles and responsibilities (who will do what and by when);**
- **co-ordinated, detailed plans for action by each jurisdiction;**
- **clear and concrete statements of expected results and timetables for both the short and the long terms, including interim targets and milestones;**
- **a system for monitoring results, to assess progress regularly;**
- **provision for adjustments and midcourse corrections as required; and**
- **provision to the public and Parliament of meaningful, comprehensive, timely and transparent information on commitments and results.**

***Department's response**: Environment Canada agrees with the Commissioner* *that smog is an important public health concern that requires further concerted action and sustained investment in order to address this problem. The Department is committed to working with other levels of government and with other government departments in continuing to make progress. To that end, Environment Canada will continue to incorporate into future strategies for addressing ozone and particulate matter lessons learned from working together with its provincial and territorial partners.*

The Canada-Wide Standards for Particulate Matter and Ozone, which have been approved in principle by federal, provincial and territorial ministers of the environment, include sound management principles that are consistent with the recommendations of the Commissioner. Environment Canada agrees that it is important these principles be incorporated into future management arrangements.

The Commissioner also emphasized the importance of clear reporting to Parliament and the public on progress. Environment Canada is continuing to enhance its capacity for results-based reporting using a suite of performance indicators and clear targets, and is committed to providing meaningful and timely information on performance expectations and results.

About the Audit

Objectives

Our audit examined key aspects of the federal government's management of its own initiatives under the 1990 NOx/VOC Management Plan, as well as its broader role of providing national leadership. Our audit work was restricted to the federal roles and responsibilities — in particular, those of Environment Canada, the federal leader on air quality. Our audit set out to identify lessons that could be learned and applied in future efforts to implement a domestic smog program.

Scope

The "basket" of pollutants that make up smog includes ground-level ozone, particulate matter, nitrogen oxides (NOx), volatile organic compounds (VOC), sulphur dioxide (SO_2) and carbon monoxide (CO). For the purpose of this audit, we defined smog as a collection of these air pollutants, commonly found in ambient (outdoor) air. While we recognize that smog is defined in various ways, we viewed it in the same way as the federal government by focussing on its main constituents, ground-level ozone and particulate matter.

We did not cover other categories of air pollutants such as hazardous air pollutants (air toxics) or ozone-depleting substances and greenhouse gases that directly affect the atmosphere. Our Office has already reported on these subjects (Ozone Layer Protection, Auditor General's December 1997 Report, Chapter 27; Responding to Climate Change, 1998 Report of the Commissioner of the Environment and Sustainable Development, Chapter 3; and Managing Toxic Substances, Commissioner's 1999 Report, Chapters 3 and 4).

Because we focussed on the pollutants commonly found in outdoor air, indoor air quality was outside the scope of our audit. However, given the amount of time that Canadians spend indoors, this emerging issue will be considered as a subject for future audit work.

Our audit responsibilities are restricted to the federal government and so we did not audit the performance of the provinces or territories.

We did not audit Canada's compliance with its various international commitments related to smog, although a descriptive summary of the commitments is provided in Appendix E.

Approach

The audit approach consisted of a review of documentation and interviews with a wide range of stakeholders and federal department officials.

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Appendix A

Canada-Wide Standards Process

The Harmonization Accord

The process used to determine national air quality management goals in Canada has been in a state of transition since January 1998, when federal, provincial and territorial environment ministers (with the exception of Quebec) signed the Canada-Wide Accord on Environmental Harmonization and its Canada-Wide Environmental Standards Sub-Agreement. The Sub-Agreement is intended to encourage governments to work together on issues like air quality, which require standards that apply across the country.

Canada-Wide Standards

The Accord provides for sub-agreements to be developed in areas of environmental management that would benefit from Canada-wide co-ordinated action. Currently three sub-agreements have been developed, including the Canada-Wide Environmental Standards Sub-Agreement. Canada-Wide Standards (CWS) focus on ambient (outdoor) air, and can include qualitative or quantitative standards, guidelines, objectives or criteria for protecting the environment and reducing risk to human health. The CWS sub-agreement was developed with the intention that by participating in the process, all governments will be committed to achieving the standards.

Environment Canada and Health Canada worked with the provinces and territories to establish the proposed CWS for key air pollutants, including ozone and particulate matter. Environment Canada, on behalf of the federal government, led or championed the development of the new standards for particulate matter and ozone, under the general direction of the Canadian Council of Ministers of the Environment (CCME). Environment Canada also chaired a committee of federal, provincial and territorial environment and health representatives to oversee the development of these standards. In addition to developing the science required to set new standards, Environment Canada's role was to lead the committee in developing options and analyzing the costs of implementing them, as well as analyzing social aspects, economic impacts and technological feasibility.

The new ozone and particulate matter standards are intended as a political commitment to action by individual governments. By signing the standards, ministers commit to attain them in the established timeline and to report to the public on progress toward them. Such a commitment is needed for Canada to achieve its comprehensive air quality management goals. Jurisdictions are to formally agree to meet the new standards through autonomous but complementary action. Implementation plans are to be prepared within the next few years. As an initial federal response to the new standards for ozone and particulate matter, the federal government intends to submit a Phase 3 Federal Smog Management Plan.

The federal/provincial/territorial co-ordinating mechanism to implement the new Canada-Wide Standards for Particulate Matter and Ozone is still being developed. The specific roles of key federal, provincial and territorial departments and ministries, such as transportation, energy, health, agriculture and industry, have not been clarified.

Appendix B

Successes in Air Pollution Abatement

Air Issues	Result
Sources of visible air pollution	These sources have been significantly reduced. The extreme levels of smoke-based pollution that could be found in large Canadian cities like Toronto and Montreal from the late 19th to the early 20th centuries are largely in the past. Soot from coal burning, sawdust and particles from steel making have all been reduced.
Lead in gasoline	Between 1974 and 1990, lead was slowly phased out of most gasoline in Canada. This resulted in major reductions in levels of lead in the atmosphere. By 1992, lead in the air of most Canadian cities had fallen to trace levels.
Vehicle emissions	In the last 30 years there have been tremendous strides in cleaning up vehicle exhaust emissions. Emissions of regulated pollutants from new cars have been reduced by up to 99 percent from the days before emission controls. In the same period, the fuel efficiency of new cars has doubled. Low-emission vehicles, with the promise of even cleaner exhaust, started appearing in 1998 and should be in widespread use by 2001.
Sources of SO_2	Sources of sulphur dioxide (SO_2) have been reduced by changes in industrial processes, installation of emission-reducing technology and switches to less harmful fuel sources. The Eastern Canada Acid Rain Program developed in the early 1980s and joint Canada/U.S. action have helped to cut Canada's national SO_2 levels significantly. Emissions were halved from 1980 to 1997 in the seven easternmost provinces.

Appendix C

Sources of Emissions, by Category

The **Transportation Category** includes air transportation; heavy-duty diesel vehicles; heavy-duty gasoline trucks; light-duty diesel trucks and vehicles; light-duty gasoline trucks and vehicles; marine transportation; motorcycles; off-road use of diesel; off-road use of gasoline; rail transportation; wearing of tires and brake lining.

The **Industrial Category** is a diverse source of smog-causing pollutants. The industries covered in this sector include abrasives manufacture; aluminum; asbestos; asphalt paving; bakeries; cement and concrete; chemicals; clay products; coal mining; ferrous foundries; grain; iron and steel; iron ore mining; mining and rock quarrying; non-ferrous mining and smelting; oil sands; other petroleum and coal products; paint and varnish manufacturing; petrochemicals; petroleum refining; plastics and synthetic resins fabrication; pulp and paper; upstream oil and gas, and wood.

Non-Industrial Fuel Combustion Category includes electrical power generation (utilities); residential and commercial fuel combustion; and residential fuel wood combustion.

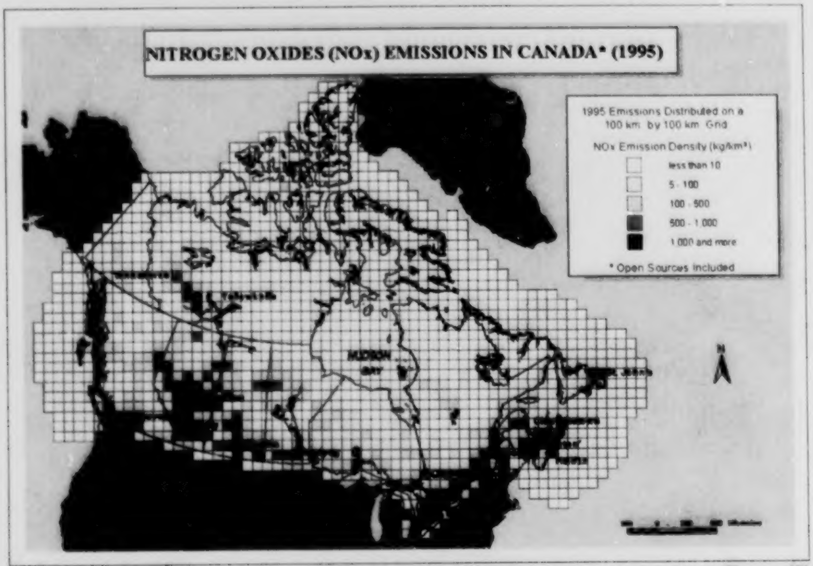
Open Sources Category includes agriculture (animals, tilling and wind erosion); construction; dust from paved and unpaved roads; forest fires; landfills; mine tailings; and prescribed burning.

Incineration Category includes industrial, commercial, municipal and wood waste incineration; crematoria; and incineration for utilities.

A **Miscellaneous Category** includes cigarette smoking; dry cleaning; fuel marketing; general solvent use; marine cargo handling; meat cooking; pesticides and fertilizer application; printing; structural fires; and surface coatings.

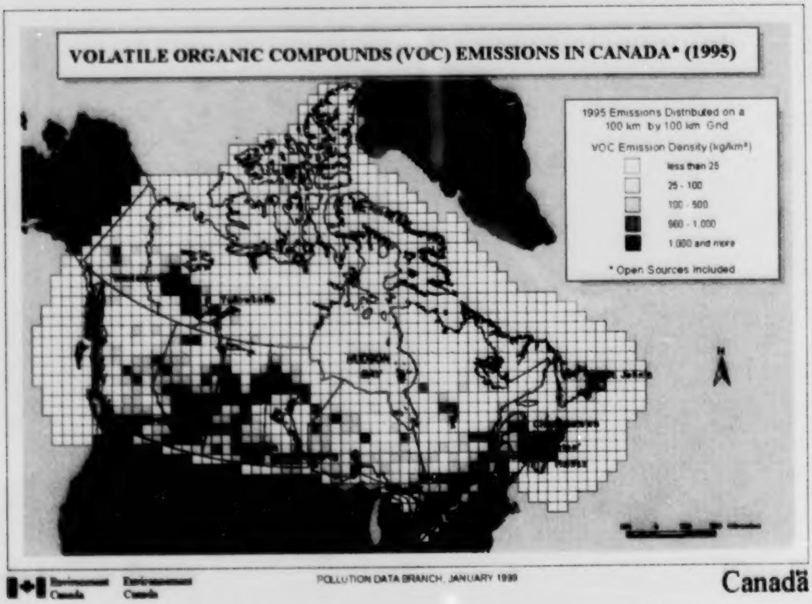
Appendix D

Geographical Presentation of Emissions


NITROGEN OXIDES (NOx) EMISSIONS IN CANADA* (1995)

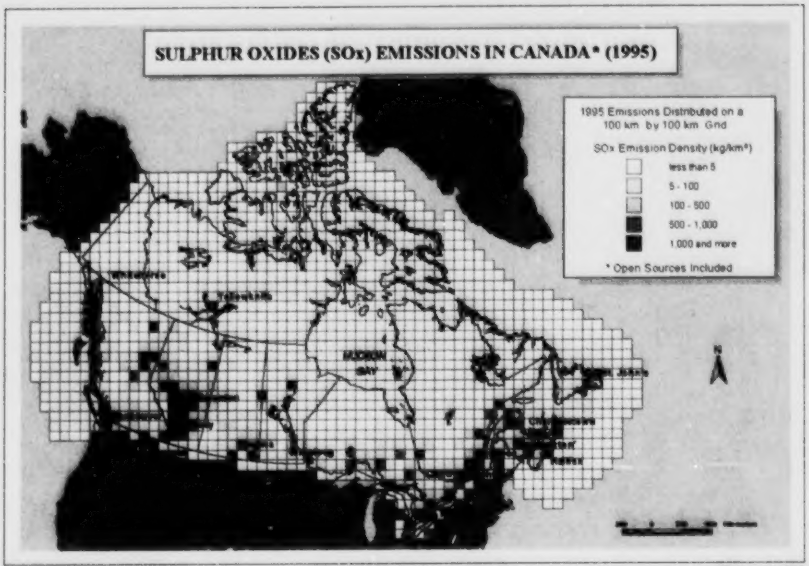
1995 Emissions Distributed on a 100 km by 100 km Grid
NOx Emission Density (kg/km²)
less than 10
5 - 100
100 - 500
500 - 1,000
1,000 and more
* Open Sources Included
Yellowknife
HUDSON BAY
N

Environment Canada Environnement Canada POLLUTION DATA BRANCH, JANUARY 1999 Canadä


VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS IN CANADA* (1995)

1995 Emissions Distributed on a 100 km by 100 km Grid
VOC Emission Density (kg/km²)
less than 25
25 - 100
100 - 500
500 - 1,000
1,000 and more
* Open Sources Included
Yellowknife
HUDSON BAY
N

Environment Canada Environnement Canada POLLUTION DATA BRANCH, JANUARY 1999 Canadä



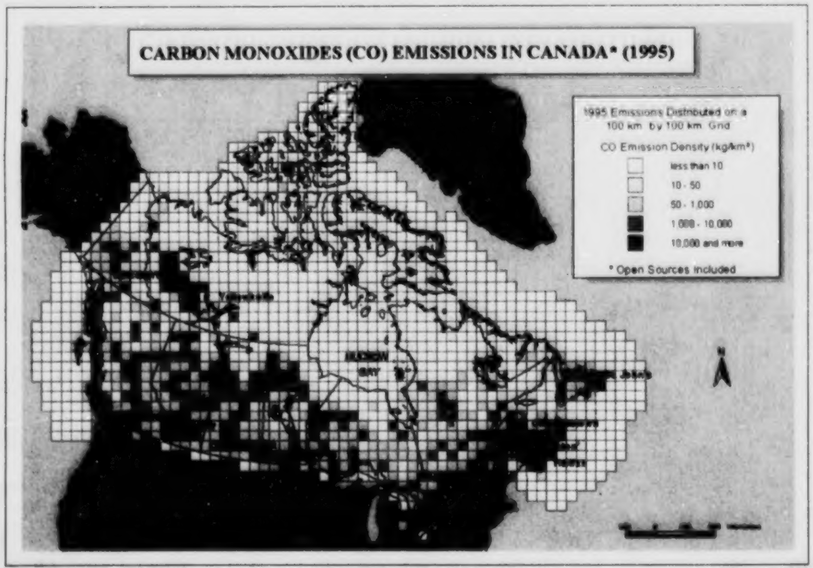
SULPHUR OXIDES (SOx) EMISSIONS IN CANADA* (1995)

1995 Emissions Distributed on a 100 km by 100 km Grid
SOx Emission Density (kg/km²)
less than 5
5 - 100
100 - 500
500 - 1,000
1,000 and more
* Open Sources Included
Yellowknife
HUDSON BAY
St. John's
N

Environment Canada Environnement Canada

POLLUTION DATA BRANCH, JANUARY 1998

Canada



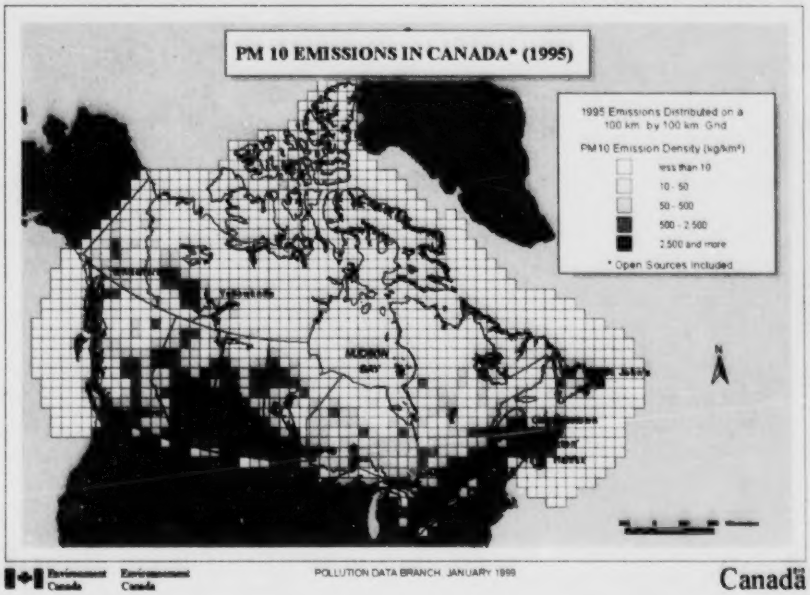
CARBON MONOXIDES (CO) EMISSIONS IN CANADA* (1995)

1995 Emissions Distributed on a 100 km by 100 km Grid
CO Emission Density (kg/km²)
less than 10
10 - 50
50 - 1,000
1,000 - 10,000
10,000 and more
* Open Sources Included
Yellowknife
HUDSON BAY
St. John's
N

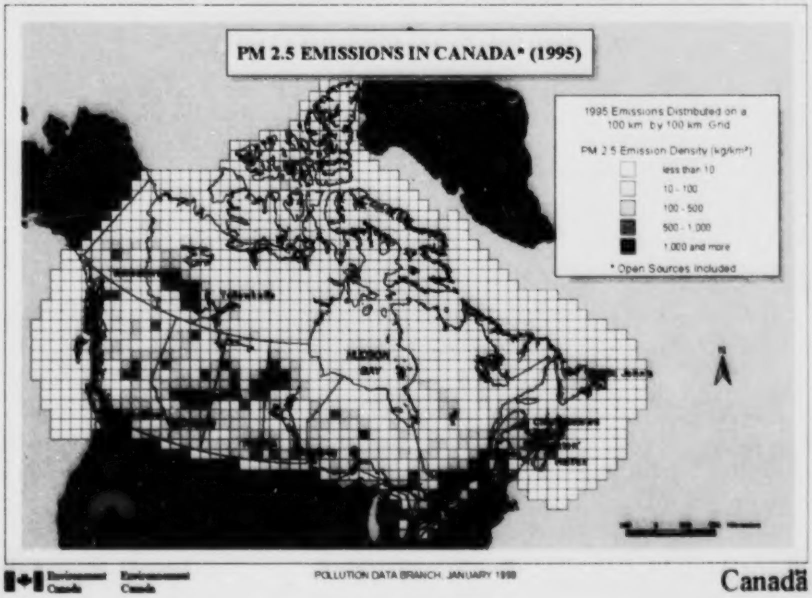
Environment Canada Environnement Canada

POLLUTION DATA BRANCH, JANUARY 1998

Canada


PM 10 EMISSIONS IN CANADA* (1995)
1995 Emissions Distributed on a 100 km by 100 km Grid
PM10 Emission Density (kg/km²)
less than 10
10 - 50
50 - 500
500 - 2 500
2 500 and more
* Open Sources Included
Yellowknife
HUDSON BAY
N
Environment Canada Environnement Canada
Canada

POLLUTION DATA BRANCH JANUARY 1999


PM 2.5 EMISSIONS IN CANADA* (1995)
1995 Emissions Distributed on a 100 km by 100 km Grid
PM 2.5 Emission Density (kg/km²)
less than 10
10 - 100
100 - 500
500 - 1 000
1 000 and more
* Open Sources Included
Yellowknife
HUDSON BAY
N
Environment Canada Environnement Canada
Canada

POLLUTION DATA BRANCH JANUARY 1999

Appendix E

International Commitments

Canada's international commitments related to smog are based on two international agreements: the 1979 United Nations Economic Commission for Europe (UN ECE) Convention on Long-Range Transboundary Air Pollution (LRTAP), and the 1991 Canada–U.S. Air Quality Agreement. In addition, Canada is a partner with the U.S. in the International Joint Commission (IJC) and with the United States and Mexico in the North American Agreement for Environmental Cooperation (NAAEC). The main international commitments are described below.

The LRTAP. This was the first international legally binding instrument to deal with problems of air pollution on a broad regional basis. Signed in 1979, it has created an important framework for controlling and reducing the damage of transboundary air pollution to human health and the environment. Since entering into force in 1983, the Convention has been expanded by a number of protocols largely targeted at reducing a specific pollutant.

Canada has signed and ratified three protocols under the framework of LRTAP related to smog: (i) the 1985 Protocol on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30%; (ii) the 1994 Protocol on Further Reduction of Sulphur Emissions; and (iii) the 1988 Protocol Concerning the Control of Nitrogen Oxides or Their Transboundary Fluxes. Canada has also signed but has not ratified the 1991 Protocol Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes. It has stated that it is continuing to work toward this commitment.

Under the auspices of the UN ECE, Canada was also involved in negotiation of a new protocol (concluded at the end of 1999) to abate acidification, eutrophication and ground-level ozone.

Canada has used this multilateral convention and its related protocols as a strategic instrument to influence the agenda on Canada/U.S. transboundary smog and acid rain issues.

The 1991 Canada–U.S. Air Quality Agreement. The transboundary flow of pollutants from the U.S. has a significant impact on air quality in parts of Canada. Environment Canada, acting on behalf of the federal government, has a responsibility to encourage emission reduction programs in the U.S.

Canada and the United States signed the 1991 Canada–U.S. Air Quality Agreement that provides for the study and control of air pollutants that cross the international boundary. The major goal of this agreement was to reduce acid rain by cutting emissions of SO_2 and NOx. As both these pollutants are also major contributors to the smog problem, urban air quality has benefited from the Agreement.

In an agreement signed April 1997, Canada and the U.S. have signaled their intent to develop a Joint Plan of Action to more specifically address the problem of transboundary air pollution and smog. The future bilateral plan will address this type of pollution through joint Canada and U.S. efforts.

The intention is to develop new annexes to the existing Canada–U.S. Air Quality Agreement which will address particulate matter (PM) and ozone, and to consider the possibility of a transboundary emissions trading program and joint regional measures.

The Joint Plan of Action would be developed with the U.S. and in partnership with the provinces. At the time of the audit, negotiations on the ozone annex had started, and plans and timetables were being set up. Environment Canada informs us that a joint assessment of transboundary PM will be completed over the next three to five years, followed by a negotiated annex on PM.

The International Joint Commission (IJC). This is a bi-national organization established by the Canada–United States Boundary Waters Treaty of 1909. The IJC's mandate, in addition to considering applications for works or obstructions in boundary or transboundary waters that may impact the water level on the other side of the boundary, also includes the conduct of investigations of other transboundary issues at the request of the governments. Over the years, the IJC has investigated air pollution problems at the request of the two governments. Under the 1991 Canada–U.S. Air Quality Agreement, the IJC co-ordinates the public review of the reports of progress of the two countries in achieving the objectives of the agreement. The IJC has a permanent International Air Quality Advisory Board that provides advice on transboundary air quality issues. Since its establishment in 1966, the Board has provided a series of progress reports, and a special report in November 1998 on Transboundary Air Quality, to the IJC on significant transboundary air quality issues including the transport, deposition and impact of SO_2, NOx, ozone and PM.

The North American Agreement on Environmental Cooperation (NAAEC). The NAFTA regime is defined broadly as comprising three agreements: (a) the North American Free Trade Agreement (NAFTA), (b) the North American Agreement on Environmental Cooperation, and (c) the North American Agreement on Labor Cooperation, all having taken formal effect on 1 January 1994, covering trade, investment, environment, and labor. The Agreement on Environmental Cooperation sets out a framework for continental environmental co-operation, including promotion of a co-operative environmental agenda among Canada, the U.S. and Mexico on issues of regional importance and mutual concern such as air pollution.

The Commission for Environmental Cooperation (CEC). Located in Montreal, the CEC was created under the NAAEC to address regional environmental concerns, help prevent potential trade and environmental conflicts and promote the effective enforcement of environmental law. The CEC has a mandate to address air quality issues in a tri-national context while at the same time co-ordinating with and enhancing ongoing bi-national activities. The goals established for the CEC air program are to further co-operation and co-ordination between the air quality management systems of the three North American countries and to provide technical and strategic tools that the three countries may apply in their efforts to combat air pollution and maintain healthy air.

Recent reports by the CEC (1997) and by the IJC (1998) have highlighted the significance of the transboundary transport of ozone and its precursors to air quality management programs in the U.S. and Canada.

Appendix F

Federal Activities for Smog Reduction

Environment Canada

- co-ordinates federal environmental policies and programs, including action on smog;
- provides support, co-ordination, facilitation and leadership for emission reduction activities and strategies that involve other jurisdictions, such as the 1990 NOx/VOC Management Plan;
- administers the *Canadian Environmental Protection Act (CEPA)*;
- leads the development of national goals, standards, guidelines and regulations and voluntary arrangements to protect Canada's air quality;
- acts as the federal champion in the development of new Canada-Wide Standards for Particulate Matter and Ozone under the federal/provincial/territorial Harmonization Accord;
- participates in education initiatives to increase public awareness about the causes and effects of smog;
- conducts research on the causes and effects of air pollutants, particularly effects on the environment;
- co-ordinates and participates in a number of other science-related activities, including air quality monitoring; quantifying and identifying the sources of smog-causing pollutants through the development of emission inventories; assessing the science of ozone and PM formation; and air quality modelling and forecasting; and
- addresses transboundary air issues and represents Canada's international interests by negotiating international air pollution agreements and instruments to decrease the cross-border transport of air pollutants (see Appendix E for information on Canada's international commitments and activities related to smog).

Health Canada

- is responsible for protecting the health of Canadians from the effects of environmental pollution, including exposures to contaminants through the air;
- conducts surveillance on health problems associated with smog and other air issues; works to advance Canadians' understanding of the health impacts of smog-related and other air pollutants and climate change;
- works jointly with Environment Canada to assess the toxicity of substances and develop control options for those substances declared and listed "toxic" under *CEPA*;
- is involved in the science assessment of ozone and particulate matter and the development of national air quality objectives (and more recently, Canada-Wide Standards) for these smog-related pollutants;
- through health promotion activities, positions health as a theme for public education and outreach on air pollution and climate change; and
- promotes the benefits of mitigating air pollution and climate change for health and well-being (active transportation, physical activity).

Transport Canada

- plays a role in reducing air pollution from transportation sources under federal jurisdiction (responsibility for regulating emissions from new cars and trucks has been transferred to Environment Canada);
- works to improve fuel efficiency of road vehicles jointly with Natural Resources Canada;
- is responsible for international transportation, the interprovincial aspects of rail, bus and truck transportation and most of the marine sector;

- participates in the development of international environmental standards governing emissions from airplane engines and ships and their application in Canada under federal legislation;
- sees itself as a leader in developing ways to reduce the impact of transportation on the environment; and
- promotes improved air quality at airports.

Natural Resources Canada

- is responsible for federal energy policy and natural resource utilization;
- spearheads initiatives that contribute to energy efficiency (including vehicle fuel efficiency — jointly with Transport Canada) and the "greening" of energy development, providing co-benefits for smog reduction;
- supports reductions of smog-causing emissions through its Efficiency and Alternative Energy Program; and
- is involved in research on the impacts of smog on forests and vegetation (through the Canadian Forest Service).

Agriculture and Agri-Food Canada

- works with the provincial governments and industry to develop and disseminate information to farmers on agricultural sources of particulate matter (primarily dust from soil erosion and ammonia) and their associated effects, and identifies ways to reduce impacts through improved farming practices;
- monitors how ozone affects the productivity of agricultural crops; and
- conducts research to develop effective methods to reduce soil erosion and increase the efficiency of manure management methods, the two main sources of particulate matter produced by the agriculture sector.

Other Federal Departments

Industry Canada and the Department of Foreign Affairs and International Trade are other federal departments with a role to play in reducing smog.

Report of the Commissioner of the Environment and Sustainable Development to the House of Commons – 2000

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2000

This 2000 Report comprises 9 chapters, including "The Commissioner's Observations" and a Foreword. In order to better meet clients' needs, the Report is available in a variety of formats. If you wish to obtain another format or other material, the Table of Contents and the order form are found at the end of this chapter.

© Minister of Public Works and Government Services Canada 2000
Cat. No. FA1–2/2000–8E
ISBN 0–662–28973–0
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Chapter 5

Partnerships for Sustainable Development

Overview

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Partnerships for Sustainable Development

Overview

Main Points

5.1 Some of the most pressing challenges facing governments today cut across departmental mandates and political jurisdictions. To address those challenges, governments look increasingly to partnering arrangements for policy development and program delivery.

5.2 Managing these working relationships — within governments, between governments and with other partners — has proved to be a particular challenge. For effective collaborative arrangements — where partners work together to meet common objectives — certain attributes are desirable. Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of a framework for those arrangements. Participants in such arrangements themselves identified five key success factors: clear and realistic objectives and expectations for results; shared or complementary goals; effective and committed individuals; clear benefits for participating organizations; and senior management interest, support and commitment.

5.3 To manage their working relationships effectively, departments need to take a broader view of what constitutes success, giving greater weight to accountability. It is not that people involved do not know how to develop and maintain working relationships and what is needed for accountability. Rather, the challenge is to turn knowledge into action. The Privy Council Office and the Treasury Board Secretariat have important roles to play in ensuring that the principles and elements of a good working relationship are understood and applied by departments.

Background and other observations

5.4 In areas of shared responsibility — like protecting the environment and promoting sustainable development — co-operation and co-ordination are essential to meeting common policy objectives. Even when not essential, they are desirable — partnerships can also improve program efficiency and effectiveness. Without co-operation and co-ordination, relevant expertise and viewpoints may not be appropriately integrated into decision making. Problems may not be well defined, priorities may not be well developed and policies may not be implemented.

5.5 This chapter — along with the following three chapters — looks at building and sustaining effective working relationships to protect the environment and promote sustainable development. Chapter 6 reports on working arrangements within the federal government, Chapter 7 on federal-provincial relationships and Chapter 8 on public-private partnerships. These chapters together present the results of 17 case studies of organizations working co-operatively to meet common objectives in areas like biotechnology, acid rain, forestry and mining.

A joint response by the Privy Council Office and the Treasury Board Secretariat is included in this chapter. They agree with our recommendation and note that initiatives are under way to strengthen horizontal policy development and issues-management capacity.

Introduction

5.6 Some of the most pressing challenges facing governments today cut across departmental mandates and political jurisdictions. The topics presented in the 1999 Speech from the Throne, for example — children and youth, the economy, health care, the environment, communities, Aboriginal peoples and Canada's place in the world — illustrate why managing what has become known as "horizontal" government is a recurring theme of public administration. Typically, a number of departments are responsible for one aspect of an issue or another but none is responsible for the whole. They need to work together to understand the full dimensions of the issue and to develop and implement a co-ordinated response to it.

5.7 Governments are also looking outward for policy development and program delivery. Partnership arrangements of various forms are becoming more common. Provincial and territorial governments, business, labour, education and other professional groups, voluntary organizations and Aboriginal peoples are some of the many partners that governments work with.

5.8 Managing these working relationships — within governments, between governments and with other partners — has proved to be a particular challenge. For example, in 1995 the Clerk of the Privy Council said in her Report to the Prime Minister on the Public Service:

> The Public Service must develop ways to better address horizontal, cross-cutting issues, including implementing the right system of incentives and accountability, which is one of the major challenges. Finding ways to effectively address horizontal issues is a difficult task, and all Western nations are trying to do a better job of it. To date, public service practice in this area has not lived up to the concepts of interdepartmental collaboration that are professed, and a better job must be done.

5.9 The Auditor General has had a long-standing interest in accountability — the obligation to answer for a responsibility conferred — where responsibilities are shared (see Exhibit 5.1). The Auditor General 10 years ago identified the environment as a prime example of the need for clearer accountability, given its importance and the fact that responsibility for protecting it was widely shared.

Typically, a number of departments are responsible for one aspect of an issue or another but none is responsible for the whole.

5.10 Based on work since then, the Office has identified desirable attributes of collaborative arrangements — where partners work together to meet common objectives (see the Appendix). Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of such a framework.

Focus of our work

5.11 Our objective was to examine the major elements in building and sustaining effective working relationships to protect the environment and promote sustainable development. The results of our work are presented in four chapters. This chapter describes the sharing of responsibility for protecting the environment and promoting sustainable development, and the implications of that sharing. It also presents the conclusions and recommendations of the following three chapters.

5.12 Chapter 6 reports on working arrangements within the federal government, Chapter 7 on federal/provincial/territorial relationships and Chapter 8 on public-private partnerships. These chapters together present 17 case studies of organizations co-operating to meet common objectives. Further details on the approach to our work are provided at the end of each chapter.

Exhibit 5.1

Managing Shared Responsibility: A Long-standing Concern

Here then is a case where government's accountability for its overall set of programs — the total government effort on the environment — is more important than focussing on the individual performance of departments as separate units, managing their resources separately and being held to account separately by different House committees. Shared responsibility in government is difficult to deal with. What must be prevented is a diffusion of responsibility to the point where effective accountability is lost.

Report of the Auditor General of Canada to the House of Commons, 1990
Matters of Special Importance and Interest

This means that the Department of the Environment, which has general responsibility for co-ordinating federal policies and programs directed at the preservation and enhancement of environmental quality, cannot act effectively on broad government-wide environmental issues except in concert with these other departments. While some memoranda of understanding exist between the Department of the Environment and various other departments, there is currently no comprehensive mechanism for a co-ordinated federal approach to environmental issues.

Report of the Auditor General of Canada to the House of Commons, 1990
Department of Environment (Chapter 18)

Effective accountability is more complex in a collaborative arrangement. The federal government is accountable to Parliament for the use of federal funds and authorities, to its partners for keeping its commitments, and, with its partners, to the public for the results the arrangement produces. In our view, this shared accountability means that more parties are accountable and it in no way lessens the federal government's accountability for its own responsibilities in the arrangement.

Report of the Auditor General of Canada to the House of Commons, 1999
Collaborative Arrangements: Issues for the Federal Government (Chapter 5)

Key weaknesses in the federal government's management of environmental and sustainable development issues:

- **Gaps between commitments made and concrete action taken.** Canadians have been at the forefront of thinking about environmental and sustainable development issues, domestically and internationally. We have been less effective at turning those thoughts and words into action — in finishing what we start. In many areas, the federal government's performance falls well short of its stated objectives.
- **Lack of co-ordination among departments and across jurisdictions.** Some of the most pressing issues facing governments today cut across departmental mandates and political jurisdictions. Effective co-ordination is essential for meeting our sustainable development challenges — governments are not very good at it.
- **Inadequate review of performance and provision of information to Parliament.** Good information is critical for good decisions: for setting priorities, designing policies and programs, assessing progress and reporting on accomplishments. Our current information base is not up to those tasks.

Report of the Commissioner of the Environment and Sustainable Development
The Commissioner's Observations, 1999

Observations and Recommendation

Working Together When Responsibilities Are Shared

Shared responsibility for the environment and sustainable development

5.13 Responsibilities for protecting the environment and promoting sustainable development are widely shared within the federal government and with provincial and territorial governments. In 1990, for example, we found that 24 federal departments had responsibilities relating to more than 50 Acts with environmental implications. Each province and territory has general environmental protection legislation for the enforcement of regulations on air, land and water quality. A range of federal and provincial laws also deal with environmental assessment, waste management, conservation, energy, agriculture, forests and fish.

5.14 To achieve their goals for sustainable development, governments may need to engage broad segments of society. Canada's National Climate Change Process is an example of shared interests and responsibilities for sustainable development. In early 1998, the federal, provincial and territorial ministers of energy and environment met, and approved a process to involve governments and stakeholders in examining the impacts, costs and benefits of addressing climate change. As part of that process, around 450 experts from governments, industry, science, the academic community, environmental groups and other non-governmental organizations are analyzing Canada's options for a climate change strategy. At the federal level alone, 13 departments and agencies are involved in the process. (In May 1998, we reported to Parliament on our audit of how the federal government was managing climate change and identified some key concerns about departments' co-ordination. We will be following up on that audit next year.)

Organizations need to work together to meet common objectives

5.15 In areas of shared responsibility — like protecting the environment and promoting sustainable development — co-operation and co-ordination are essential for meeting common policy objectives. Even when not essential, they may be desirable — partnerships can also improve program efficiency and effectiveness. Without co-operation and co-ordination, relevant expertise and viewpoints may not be appropriately integrated into decision making. Problems may not be well defined, priorities may not be well developed and policies may not be implemented.

Co-operation and co-ordination are essential for meeting common policy objectives.

5.16 While departments and different levels of government often co-ordinate policy development, the federal government also delivers programs and services with provincial and territorial governments and with groups in the private and voluntary sectors. Partnerships can offer the potential for more innovative, cost-effective and efficient delivery of the programs and services traditionally provided by federal organizations.

5.17 But partnering is not without risks. Among them can be arrangements poorly defined, commitments not met, insufficient attention to protecting the public interest, too little transparency and inadequate accountability.

The challenges of working in areas where responsibilities are shared

5.18 Productive working relationships are not easily developed or maintained. They require special effort by all the parties. In 1999, we reviewed the challenges of making these relationships work. The challenges include:

- ensuring effective leadership to create a vision of where the partners want the arrangement to go and to translate that vision into reality;

- dealing with complex relationships in which each participating organization pursues goals related to its own interests as well as the common goals of the arrangement;

- co-ordinating efforts among partners and within the federal government; and

- building trust and confidence among the partners.

Key ingredients for a successful working relationship

When organizations work together, the accountability relationships become more complex.

5.19 Successful working relationships depend on factors that are both subjective and objective:

- Subjective factors include each partner's expectations about the other's willingness and ability to collaborate; beliefs about the legitimacy and desirability of working together and of the goals to be pursued; and trust. These are factors of attitude; many of them are preconditions for entering an arrangement.

- Objective factors include formal agreements, availability of resources, accountability relationships, and administrative support for the work. They fall more directly under the control of the partners, and are important in making the relationship work.

5.20 To determine which factors they considered most important to a good working relationship, we asked the people we interviewed for our case studies to identify the 5 most important from a list of 22. The results are presented in Exhibit 5.2. The factors with the strongest consensus were:

- clear and realistic objectives and expected results;

- shared or complementary goals;

- effective and committed individuals;

- clear benefits for the participating organizations; and

- senior management interest, support and commitment.

5.21 Those factors were largely unrelated to the type of working relationship. Although not always in the same order, people in working relationships with other federal government departments, with other governments or between the public and private sectors chose the same five factors.

Most accountability issues are not "top of mind"

5.22 When organizations work together, the accountability relationships become more complex. They involve accountability among the partners; accountability between each partner and its governing body; and accountability to the public.

5.23 We found, however, that many of the factors that are critical for an effective accountability regime are not "top of mind" when people think of building a successful working relationship. In earlier work, we identified the following questions as the main indicators of effective accountability in a partnership:

- Are the objectives, the expected levels of performance and results and the operating conditions agreed to and clear?

- Are the authorities, roles and responsibilities of each partner clear?

- Are the expectations for each partner balanced with its capacities?

- Can performance be measured and credibly reported to Parliament and the public?

- Has adequate provision been made for review, program evaluation and audit?

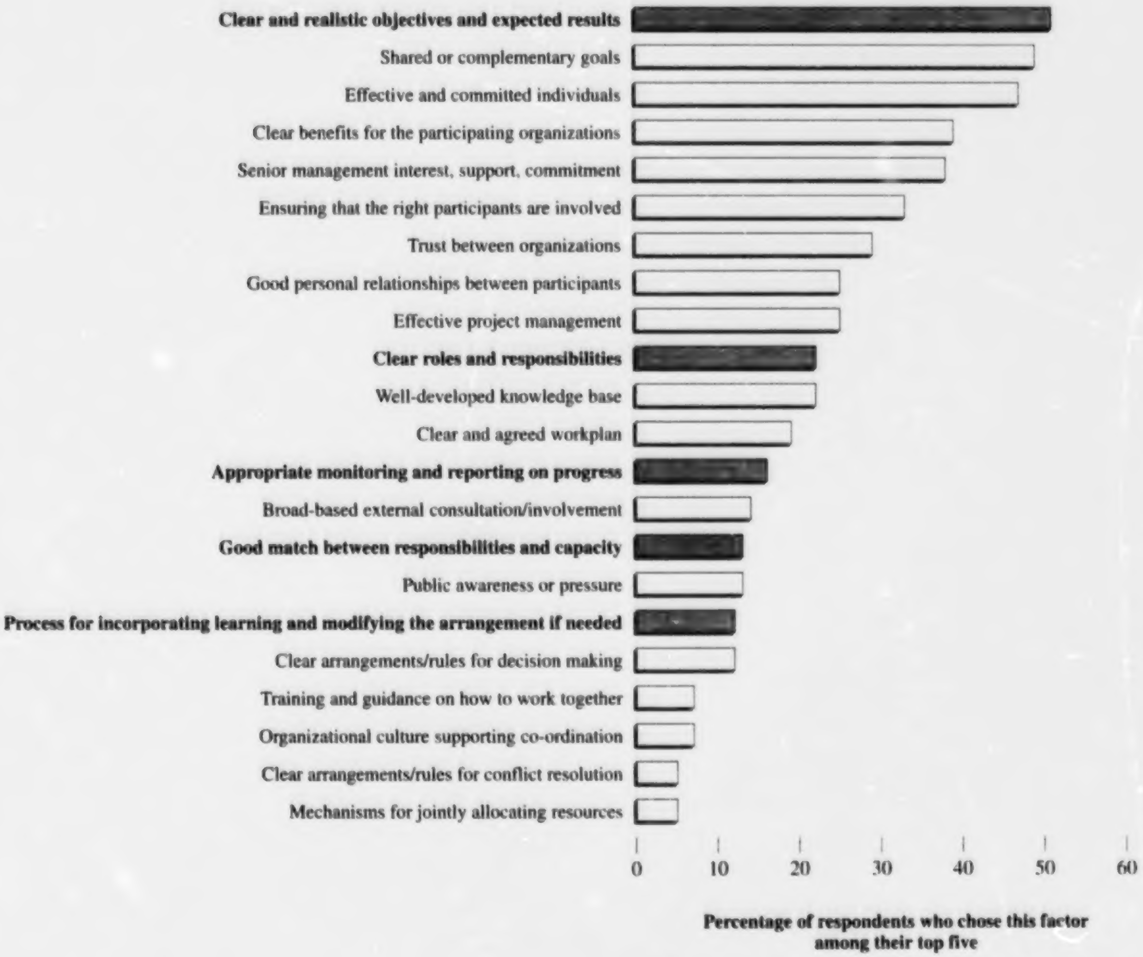
5.24 These questions arose as part of a broader analysis of a governing framework for new arrangements in which the federal government involves external partners in the planning, design and achievement of federal objectives (see the Appendix).

5.25 As Exhibit 5.2 indicates, those we interviewed cited clear objectives and expected results as critical to a good working relationship; these are also important to accountability. But they placed the other elements needed for accountability — clear roles and responsibilities, balance between expectations and capacities, provision for monitoring, reporting and evaluation — well down the list.

5.26 **A tension between developing a good working relationship and ensuring effective accountability.** We do not interpret these results as implying that

Exhibit 5.2

Factors Critical to a Successful Working Relationship



▇ Factors critical to an effective accountability arrangement (shown in bold)

Source: Participants in the case studies listed in Exhibit 5.3

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Different aspects need to be emphasized at different stages of the relationship.

there is ultimately a trade-off between developing a good working relationship and ensuring that the arrangement is structured to provide for appropriate reporting to ministers and Parliament. Rather, we observed that different aspects need to be emphasized at different stages of the relationship — earlier stages may need greater weight on developing the relationship, for example. Although not all the elements needed for accountability have to be finalized before beginning to implement the arrangement, agreement on them must ultimately be reached. Any tensions between the two need to be managed with the long-term success of the endeavour in mind.

Case Studies: Examples of Working Together

5.27 The next three chapters were built around 17 case studies that illustrate a range of working relationships and sustainable development issues. Exhibit 5.3 lists those case studies. Taken together, the cases confirm the importance of the elements we have set out for accountability in successful relationships. They also highlight other issues that are more specific to the type of working relationship being pursued.

Working within the federal government (Chapter 6)

5.28 Departments have chosen a variety of approaches to working with other departments in delivering programs, developing new strategies, consulting with stakeholders, achieving consensus on policy positions, and exchanging information. The approaches range from formal arrangements that create new entities to informal, voluntary networks for exchanging information.

Exhibit 5.3

Working Together: The Case Studies

Working Together in the Federal Government (Chapter 6)

- Canadian Biotechnology Strategy
- First Nation Forestry Program
- "Greening" Procurement
- Biosafety Protocol
- Assessment of Aquatic Effects of Effluent from Metal Mines
- Sustainable Development Strategies

Co-operation Between Federal, Provincial and Territorial Governments (Chapter 7)

- Eastern Canada Acid Rain Program
- National Forest Strategy
- North American Waterfowl Management Plan
- Statement of Commitment to Complete Canada's Networks of Protected Areas
- Greenhouse Gas Emission Reduction Trading Pilot

Working With the Private Sector (Chapter 8)

- The National Packaging Protocol (Canada)
- The Great Printers Project (United States)
- Eco-Efficiency in the Saguenay Region (Canada)
- A Sustainable Development Management System (United Kingdom)
- Contaminated Sites Conversion (United States)
- Sectoral Sustainability Strategies (United Kingdom)

there is ultimately a trade-off between developing a good working relationship and ensuring that the arrangement is structured to provide for appropriate reporting to ministers and Parliament. Rather, we observed that different aspects need to be emphasized at different stages of the relationship — earlier stages may need greater weight on developing the relationship, for example. Although not all the elements needed for accountability have to be finalized before beginning to implement the arrangement, agreement on them must ultimately be reached. Any tensions between the two need to be managed with the long-term success of the endeavour in mind.

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5.29 In most of the case studies we examined, departments had chosen an appropriate form of arrangement for delivering a program or developing a policy. For example, the 1993 assessment of the aquatic effects of metal mining involved five federal departments and agencies along with provincial officials, mining industry representatives, environmental groups and Aboriginal organizations. Over a period of three years, a good planning process, a neutral secretariat, effective dispute resolution, and sufficient resources contributed to the development of recommendations that all participants supported.

5.30 However, departments did not always spell out clearly who was to do what. Key problems included unclear or unstated objectives, poorly described roles, blurred accountability and weak mechanisms for dispute resolution. Other problem areas included managing the effects of participant turnover, ensuring that departments had incentives to collaborate, and paying attention to monitoring and evaluation.

5.31 In most of the case studies, the intended results were achieved. The chief exception was "greening" procurement, where inadequate co-ordination and a lack of leadership by central agencies inhibited progress. In some cases, the lack of monitoring, of evaluation plans and of information limited Parliament's ability to understand whether the intended goals were or would be attained. It also inhibited effective learning from past successes and failures.

5.32 It is unrealistic to expect departments to track in detail each of their horizontal initiatives in order to learn the key lessons, especially when they are facing high turnover rates. This is an area where central agencies can add value and contribute to the more effective management of issues that cut across departments, including sustainable development.

Working with provincial and territorial governments (Chapter 7)

5.33 The environment and many other aspects of sustainable development fall under shared jurisdiction. They require close co-operation between the federal and the provincial/territorial governments. But entering into a co-operation agreement is not an end in itself. The agreement needs to deliver results for Canadians, and in an efficient and economical manner.

Entering into a co-operation agreement is not an end in itself.

5.34 The case studies in Chapter 7 demonstrate the importance of relationships where partners build and maintain trust between them. They show that leadership and commitment from all parties involved as well as public and political support are essential. Finally, they confirm that partners need the discipline to follow all the necessary steps during the life cycle of an agreement.

5.35 The case studies illustrate how the presence — or absence — of these different elements affects an agreement's success positively or negatively.

5.36 **Before entering into an agreement,** prospective partners need to be convinced that the issue is important and that a partnership is likely to be the best way to deal with it and offer clear benefits to the participating organizations. They need to recognize their respective jurisdictions and take into account the ability of their potential partners to deliver desired results. Finally, they need to consult and involve all the organizations whose commitment is essential to achieving the agreement's objective. If the partners do not meet these conditions, they could still reach an agreement but likely would not accomplish the desired results.

5.37 **In designing the agreement,** accountability issues between the partners become important. Does the agreement specify clear, common or complementary objectives, time frames and expected results as well as clear roles and responsibilities? Are there appropriate provisions for co-ordinating, monitoring and reporting performance as well as evaluating and modifying the agreement, if necessary? Have partners set the stage for a flexible approach to implementation that will take into account differences among jurisdictions?

5.38 **During the implementation of the agreement,** partners have to keep their commitments. Each partner needs to produce an early action plan that defines clear roles and responsibilities within its own organization and sets targets and time frames. Partners also need to integrate the agreement's objectives into their policies and operations. Finally, partners must co-ordinate activities, monitor results and submit timely and transparent progress reports.

5.39 The cases we examined also provide examples of a "tight-loose" working relationship — one that is "tight" (or strict) on the results that partners have to achieve based on intergovernmental agreement and "loose" (or lenient) on the way they achieve them in the particular circumstances of each jurisdiction. For example, in the 1985 Eastern Canada Acid Rain Program, ministers agreed to an emission limit of 2,300 kilotonnes of sulphur dioxide by 1994, down from 3,812 kilotonnes in 1980. Meeting that target, coupled with parallel action in the United States, would reduce acid deposition to a level then viewed as acceptable to protect moderately sensitive aquatic systems. The program let provincial governments decide how to achieve the reductions; they took different approaches but met their objectives.

Working with the private sector (Chapter 8)

5.40 The private sector is also looking for more flexible forms of working relationships, and is participating more often in co-operative approaches to defining problems and developing solutions. The spectrum extends from information sharing and consultation to the creation of new entities to deliver a good or service. In our 1999 Report, for example, we noted that voluntary programs are a core element of the federal strategy for managing toxic substances.

5.41 The cases we examined illustrate a progression from improving regulatory effectiveness through co-operation between government and business, to promoting new management tools, and to encouraging the integration of economic, social and environmental considerations into decision making. For example, Natural Resources Canada worked with Alcan Aluminium Limited on a pilot project to introduce eco-efficiency concepts to small and mid-size businesses in the Saguenay region.

5.42 The case studies confirmed the importance of the accountability and relationship components of a good arrangement. They also illustrate the importance of a strong regulatory regime and enforcement capacity to stimulate and support action under the arrangement's initiatives. Other important considerations in an effective public-private arrangement include a commitment to timely action; a shared understanding of the differences in organizational behaviour between the public and private sectors — for example, the different levels of risk tolerance; and the need to focus initiatives on performance and tangible results.

Similarities and differences

5.43 As we have noted, participants in the three sets of case studies highlighted several important common factors (see Exhibit 5.2). We conclude that officials who recognize and include the factors are much more likely to develop and maintain successful working relationships. Conversely, the absence of these factors increases the risk of failure. In each relationship, accountability needs to be spelled out clearly.

5.44 Our case studies have also shown us some important differences among the three types of working relationships. When departments work with one another, they are working within a shared framework, one in which central agencies can help co-ordinate and resolve disputes. When departments work with their provincial and territorial counterparts, there is a greater need for formally negotiated and documented arrangements between governments. When departments work with business, the partners need to acknowledge and reflect the role of regulation and the cultural differences between the public and private sectors.

Turning Knowledge Into Action

5.45 To manage their working relationships effectively, departments need to take a broader view of what constitutes success, giving greater weight to accountability. It is not that the people involved do not know how to develop and maintain working relationships and what is needed for accountability.

Departments need to take a broader view of what constitutes success, giving greater weight to accountability.

5.46 Within the federal government alone, the attributes of good working relationships have been studied by deputy ministers, the Treasury Board Secretariat, the Canadian Centre for Management Development and the Auditor General (see Exhibit 5.4). There is an extensive body of guidance available to people who want to build a successful working relationship with others. The case studies we examined also provide a number of examples of good practices.

5.47 But knowing what to do is sometimes not enough. In 1995, the Treasury Board Secretariat said that "a wealth of information and experience already exists in many departments" on partnerships with other levels of government, the private sector and non-government organizations. A year later, the Deputy Minister Task Force on Managing Horizontal Policy Issues said:

> The principal factors supporting horizontal issues management are not new or revolutionary. For all kinds of policy issues, they represent the fundamentals of policy development — the need to know the rationale for an initiative and expected outcomes, a

Exhibit 5.4

Strengthening Working Relationships: A Reader's Guide

1995	Framework for Alternative Program Delivery, Treasury Board Secretariat
	The Federal Government as Partner: Six Steps to Successful Collaboration, Treasury Board Secretariat
1996	Managing Horizontal Policy Issues, Deputy Minister Task Force
	Service Delivery Models, Deputy Minister Task Force
	Values and Ethics, Deputy Minister Task Force
1997	Getting Government Right: Governing for Canadians, Treasury Board Secretariat
1998	Managing Horizontal Government: The Politics of Coordination, B. Guy Peters, Canadian Centre for Management Development
	Citizen-Centred Service and the Partnership Option, Treasury Board Secretariat
1999	Collaborative Arrangements: Issues for the Federal Government, Office of the Auditor General of Canada, 1999 Report, Chapter 5
	Involving Others in Governing: Accountability at Risk, Office of the Auditor General of Canada, 1999 Report, Chapter 23

clear understanding of relative roles and responsibilities, a recognition that policy development can be time consuming, and so forth. For the key priorities, with their custom-built, intensive processes — these process fundamentals are critical. And yet, due to the policy pressures that characterize these initiatives, taking the time up front to get the fundamentals right remains an ongoing challenge.

Central agencies can contribute to the more effective management of issues that cut across departments.

5.48 The challenge is to turn knowledge into action. In its report, the Deputy Minister Task Force made a series of proposals for "jump starting horizontal issues management" by the federal government. It noted that central agencies and departments themselves have roles to play in strengthening the management of horizontal issues. One recommendation was that the Treasury Board Secretariat develop a "best practices" guide to teamwork in the federal system.

5.49 The Privy Council Office has a key role to play in ensuring policy co-ordination within the federal government. It operates at the strategic and government-wide level, monitoring and advising on horizontal issues, clarifying roles and responsibilities, trouble shooting and long-term planning. The Treasury Board Secretariat, through its control and oversight of many aspects of government operations, is uniquely placed to offer direction and advice on management issues.

5.50 The Privy Council Office should work with the Treasury Board Secretariat to ensure that the principles and elements of effective working relationships — within the federal government, between governments and with non-government organizations — are understood and applied by federal departments and agencies.

Privy Council Office and Treasury Board Secretariat joint response: *Sustainable development is among a growing number of policy issues that cut across the mandates of many departments and even beyond the jurisdiction of the federal government. This chapter notes that success in dealing with them depends on effective working relationships and partnerships. We agree with the recommendation. This is, in fact, something we do now and will continue to do in our ongoing contacts with other departments. A number of initiatives have been launched in recent years to strengthen horizontal policy development and issues-management capacity. The case studies reported in chapters 6 through 8 illustrate the need to continue with these capacity-building initiatives.*

5.51 In Chapter 6, we make a similar recommendation for working relationships among departments. Here, we have expanded it to include all cases where federal departments are seeking to work effectively with others.

Conclusion

5.52 This chapter examined the major elements of building and maintaining successful working relationships for dealing with sustainable development issues. Some of the most pressing challenges facing governments today cut across departmental mandates and political jurisdictions. To address those challenges, governments look increasingly to partnership arrangements for policy development and program delivery.

5.53 In areas of shared responsibility — like protecting the environment and promoting sustainable development — co-operation and co-ordination are essential to meeting common policy objectives. Even when not essential, they are desirable — partnerships can also improve program efficiency and effectiveness. Without co-operation and co-ordination, relevant expertise and viewpoints may not be appropriately integrated into decision making. Problems may not be well defined, priorities may not be well developed and policies may not be implemented.

5.54 Managing these working relationships — within governments, between governments and with other partners — has proved to be a particular challenge. For effective collaborative arrangements — where partners work together to meet common objectives — certain attributes are desirable. Credible reporting, effective accountability mechanisms, transparent processes and protection of the public interest are basic elements of a framework for those arrangements. And participants in such arrangements themselves identified five key success factors: clear and realistic objectives and expectations for results; shared or complementary goals; effective and committed individuals; clear benefits for participating organizations; and senior management interest, support and commitment.

About Our Work

Objective

The objective of our work was to examine the major elements of building and maintaining successful working relationships for dealing with sustainable development issues.

Scope and Approach

To carry out this work, we drew upon related audits and studies carried out by this Office, reviewed the relevant academic literature and conducted selected casework. We used a combination of audit and study methodology.

- Chapter 6 covers an audit that examined six cases, spanning the range of mechanisms federal departments and agencies use to work with one another. The number of departments in the cases ranged from two to more than 20, reflecting a mix of different sustainable development issues.
- Chapter 7 reports on a study that selected five cases to illustrate a range of federal/provincial/territorial arrangements, both Canada-wide and with selected provinces. Each agreement also involved, to different degrees, partners from industry and from environmental organizations.
- Chapter 8 presents a study that considered partnership arrangements between government departments and the private sector in the United States, the United Kingdom and Canada. The cases included innovative examples that emphasized regulatory approaches, environmental management systems and integrated decision making.

More details on scope and methods can be found at the end of each chapter.

None of the case studies involved a full evaluation. Rather, we focussed on the working relationships themselves. We believe the lessons from the case studies are applicable to most types of working relationship — within the federal government, between governments and with non-government organizations. However, our work did not support broad generalizations about the overall effectiveness of the federal government as a partner.

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Appendix

A Governing Framework for New Working Arrangements

To ensure credible reporting:

- Clear public objectives
- Concrete performance expectations
- Appropriate performance measurement and reporting regime

To establish effective accountability mechanisms:

- Clear roles and responsibilities
- Performance expectations that are balanced with capabilities
- Well-defined management structure
- Appropriate monitoring regime
- Partner dispute resolution mechanisms
- Specific evaluation provisions
- Procedures to deal with non-performance
- Appropriate audit regime

To ensure adequate transparency:

- Public access to information
- Communication of information on key policies and decisions

To protect the public interest:

- Citizen complaint and redress mechanisms
- Public consultation/feedback mechanisms
- Policies to promote pertinent public sector values

Report of the Auditor General of Canada, 1999
Involving Others in Governing: Accountability at Risk (Chapter 23)

Chapter 6

Working Together in the Federal Government

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies and practices of the Office of the Auditor General. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants. The numbered paragraphs in bold face represent recommendations.

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Working Together in the Federal Government

Main Points

6.1 Canada's unique approach to achieving sustainable development demands that federal departments work well with one another. They can use a variety of mechanisms, ranging from the creation of new organizations to cost-sharing agreements to voluntary networks for information exchange. Through six case studies, we examined the key factors affecting the success of such mechanisms.

6.2 We found that departments need to define clearly "who does what". Key problem areas include unclear objectives, poorly defined responsibilities, unclear accountability and weak dispute resolution. Critical success factors include managing the effects of participant turnover, ensuring that departments have the incentives to collaborate, and paying sufficient attention to the results of monitoring and evaluation to learn from past experience.

6.3 Good interdepartmental co-ordination is limited by departments' inability to compel other departments to act, except through persuasion and negotiation. The primary central agencies, the Privy Council Office and the Treasury Board Secretariat, may have a crucial role to play in achieving a "Government of Canada" perspective.

Background and other observations

6.4 The first case study we considered, the recently renewed Canadian Biotechnology Strategy, involves over 20 departments and agencies and the creation of a new secretariat. It was built on a successful consultation effort, but now faces issues of unclear roles and responsibilities, increased bureaucracy and administrative weaknesses. Concrete action plans and an evaluation plan have not yet been made public.

6.5 Natural Resources Canada and Indian and Northern Affairs Canada are promoting forestry-based economic opportunities for First Nations communities. Clear objectives and a flexible management structure have supported the program's success. For example, other organizations contributed $21 million beyond initially planned levels. We identified the need for improved co-ordination with other departments and for better monitoring of results.

6.6 The federal government has committed to taking environmental concerns into account in its purchases of over $14 billion annually in goods and services. A centrally co-ordinated approach is needed to ensure that this objective can be achieved at the best value for taxpayers. Despite repeated attempts to co-ordinate over the last decade, departmental policies are missing or inconsistent, efforts are being duplicated, and roles and responsibilities are not clear. We believe the Treasury Board Secretariat needs to play a central role in co-ordination.

6.7 Canada has played a key role in international negotiations to regulate the transboundary movement of living genetically modified organisms. An interdepartmental working group successfully prepared a negotiating position in the face of very high stakes, uncertain impacts, and conflicting perspectives. The departments went through a long and difficult process in which disputes were not always effectively resolved. In our view, the federal government needs to take a strategic approach to managing the tension between the trade and environmental agendas.

6.8 Led by Environment Canada, departments worked together and with other stakeholders to assess the aquatic effects of effluent from metal mines. Solid planning, a neutral secretariat, good dispute resolution and adequate resources helped ensure a successful outcome. This success was built on past experience with pulp and paper regulations.

6.9 In our last case study, we examined co-ordination among departments with respect to their sustainable development strategies. In the first round of strategies, departments did not adequately co-ordinate their content, shared commitments and consultation processes. The Interdepartmental Network on Sustainable Development Strategies is facilitating improved information exchange and co-ordination among departments for the second round. The effectiveness of the Network is limited, however, by its voluntary nature, unclear reporting relationships and high turnover of participants.

The departments' and agencies' responses to our recommendations are included in the chapter. They agree with the recommendations and describe actions to deal with some of them.

Introduction

Sustainable development requires departments to work together

6.10 At the federal level, Canada has adopted a unique model for advancing sustainable development. Several other countries (for example, the United Kingdom, Australia and Sweden) have established a single overall sustainable development strategy that provides a framework for individual agencies. In Canada, each federal department is responsible for preparing and implementing its own strategy. Each department must now identify how it can contribute to ensuring that development is sustainable over the long term — and then work to make it happen.

6.11 This individual approach makes it easier to identify who is responsible for particular results, reinforcing the accountability of ministers for their departments' activities. At the same time, this approach demands effective co-ordination among departments — no one department can achieve sustainable development in isolation. Each department has its own legislated mandate to work on one part of sustainable development. The challenge is to ensure that all involved in the effort have a common set of "blueprints" and a shared understanding of one another's roles.

6.12 As noted in Chapter 5, effective co-ordination among departments remains a central challenge for parliamentary democracies. Several areas, such as information technology, human resources and financial management, require that departments work in a common framework, share information and co-operate on joint action. Such co-ordination efforts are crucial to good governance and they present continuing challenges given the trend to decentralizing public administration.

6.13 Sustainable development accentuates the need for departments to work together. As we have highlighted in our reports, many of the tough sustainable development issues cut across departmental lines (for example, climate change, loss of biodiversity, smog, management of toxic substances). Many of the solutions demand an integrated approach to decision making. Perspectives from several different departments may need to be identified, balanced and synthesized to bring together the three aspects of sustainable development (environmental, social and economic).

Sustainable development accentuates the need for departments to work together.

This audit is part of a larger project

6.14 This audit is one of three closely related projects — each examining one way in which federal departments work with other organizations to achieve their sustainable development goals. This audit addresses interdepartmental co-ordination. Chapter 7 reviews the experience with co-operation between the federal government and provincial and territorial governments. Chapter 8 considers co-operation between the federal government and the private sector. Chapter 5 provides an overview and summarizes the key conclusions that cut across the three different types of arrangements.

Focus of the audit

6.15 The primary purpose of this audit was to demonstrate to Parliament and to federal departments that effective partnerships can be created and managed among federal departments. To do this, the overall objective was to identify the key success factors for departments working with other departments to address sustainable development issues. We approached the audit by using case studies — to bring the lessons to life.

6.16 The secondary purpose of our audit was to determine whether departments are doing what they said they would do in their sustainable development strategies. Departments made commitments in their 1997 sustainable development strategies to work with other departments. The case studies were selected primarily from these commitments.

6.17 We selected six case studies:

- the development of the Canadian Biotechnology Strategy;
- the implementation of the First Nation Forestry Program;
- the promotion of "environmentally friendly" purchasing decisions;
- the preparation of a negotiating position for a protocol under the Biodiversity Convention;
- the assessment of the aquatic effects of effluent from metal mines; and
- the work of the Interdepartmental Network on Sustainable Development Strategies.

Our approach was not a detailed audit of all aspects of these case studies; the focus was on interdepartmental co-ordination and the impact it has on achieving results.

6.18 Further details on the audit are included at the end of the chapter in **About the Audit**.

Observations and Recommendations

Committing to Co-ordination

Departments have made extensive commitments to work with others

In the context of sustainable development, departments have made extensive commitments to co-ordination and partnerships.

6.19 In the context of sustainable development, departments have made extensive commitments to co-ordination and partnerships. We examined references in the first sustainable development strategies to various forms of working together. The partnerships were described in quite general terms (for example, the need to work with the private sector) in 60 percent of the almost 650 references. Where departments actually named their potential collaborators, they were most specific about the other government departments with which they were planning to work.

6.20 The weight that departments attached to working with others varied greatly in the strength, number and specificity of commitments. For example, Environment Canada alone accounted for 15 percent of the total references — four times as many as expected if all departments had placed an equal emphasis on this mode of operation. In contrast, the strategy for Solicitor General Canada contained two references to working with others.

6.21 Departments tended not to reinforce one another's commitments. Of the 91 cases where departments named other departments involved in a specific commitment, only four were acknowledged by the other departments. In its sustainable development strategy, Environment Canada identified five cross-cutting issues: climate change and variability, the North, science and technology, the federal freshwater strategy, and biodiversity. It then went on to comment, "Because government coherence is essential to the SDS [sustainable development strategy] process, these kinds of issues will be addressed in all departmental strategies." Most other departments did not declare the need to work jointly on these issues in their own strategies. This lack of mutual acknowledgement poses a risk that departments may not have the interdepartmental support necessary to deliver on their commitments.

Departments have several key reasons to work together

6.22 We observed that departments chose to work with other departments for a variety of reasons. At the departmental level, co-ordination is necessary to resolve issues that cut across departmental mandates, to present a united front to outside organizations, to obtain support for departmental positions, and to ensure effective use of resources. This leads to the question, "Is the particular initiative well co-ordinated?"

6.23 Government departments in other countries have used a broad array of mechanisms to manage horizontally. In the United Kingdom, for example, the Cabinet Office's Performance and Innovation Unit addresses strategic issues that cut across public sector institutional boundaries. The Unit reports directly to the Prime Minister and "reviews policy to improve co-ordination and practical delivery of services involving more than one public body." In Australia, the Greenhouse Office has co-ordinated electricity procurement among different agencies. The national audit offices in these countries have reported on the success of such co-ordination efforts.

6.24 At the government-wide level, co-ordination is necessary to avoid duplication or gaps among programs, policies and processes (including internal and external consultation). This raises the question, "Are there gaps, overlaps or conflicts in how departments are working together?"

6.25 In the United States, the *Government Performance and Results Act* emphasizes good co-ordination. A recent report by the General Accounting Office commented, "Virtually all of the results that the government strives to achieve require the concerted and co-ordinated efforts of two or more agencies. However, mission fragmentation and program overlap are widespread and programs are not always well co-ordinated. This wastes scarce funds, frustrates taxpayers, and limits overall program effectiveness." The General Accounting Office pointed to the need for strategic plans to address co-ordination requirements, and the value of setting intermediate goals to clarify agency-specific contributions to the final results.

6.26 **Alternative mechanisms.** We observed that departments applied a wide range of approaches to working together, including bilateral information exchange, negotiating a common position, and the creation of interdepartmental secretariats to manage controversial issues (see Exhibit 6.1). At the extreme extent of co-ordination, departments may be merged. For example, in the United Kingdom the environment and transport ministries were combined to improve policy integration. The case studies in this chapter cover the range of approaches, from the creation of a secretariat (the Canadian Biotechnology Strategy Secretariat) to a network facilitating information exchange (the Interdepartmental Network on Sustainable Development Strategies).

At the government-wide level, co-ordination is necessary to avoid duplication or gaps among programs, policies and processes.

There are common elements of good practice

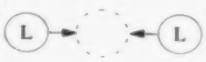
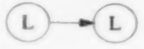
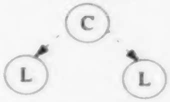
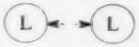
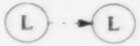
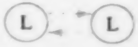
6.27 Chapter 5 outlines the elements of a good working relationship involving federal departments — whether with the provinces and territories, the private sector or other departments. The necessary ingredients of interdepartmental co-ordination have also been examined in a variety of studies and audits. In 1995, the Task Force on Managing Horizontal Policy Issues described how departments and central agencies could improve the management of cross-cutting issues. The Office of the Auditor General has repeatedly emphasized the need for good co-ordination, highlighting well-defined roles and responsibilities, clear work plans, meaningful performance expectations, effective monitoring, and leadership that transcends departmental mandates.

Departments applied a wide range of approaches to working together.

6.28 In the Auditor General's 1999 Report, Chapter 23, we summarized the essential elements of a governing framework for arrangements between the federal government and other

Exhibit 6.1

Some Types of Interdepartmental Co-ordination

Type	Creation of new entity	Memorandum of understanding	Central agency lead	Shared policy negotiation	Interdepartmental consultation	Information exchange
Diagram						
Description	Departments contribute resources (and responsibilities) to a new entity to address a shared policy issue	Departments formally agree to work together, sometimes involving shared resources	Central agency provides direction to line departments to ensure a co-ordinated approach	Departments negotiate a shared policy, sometimes with central agency support	Departments provide input to one lead department	Departments share information about an issue of common concern, sometimes chaired by one department
Action	Action taken by the new entity, as well as by individual departments	Action taken by individual departments, according to terms of agreement	Action taken by line departments, guided and monitored by central agency	Action may be taken by line departments according to negotiated position	Action taken by the lead department	No action necessarily taken
Example	Canadian Biotechnology Strategy	First Nation Forestry Program	"Green" procurement	Biosafety Protocol	Metal Mining Liquid Effluent Regulations	Interdepartmental Network on Sustainable Development Strategies
Trends	——— Decreasing commitment ———► ——— Increasingly voluntary ———►					

Ⓛ Line department

Ⓒ Central agency

——► Resource flow

- - ► Information flow

- - ► Possible information flow

Source: Office of the Auditor General

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organizations, whether they be other levels of government or the private sector. These elements fall into four categories: credible reporting, effective accountability mechanisms, adequate transparency, and protection of the public interest. We believe these elements are also required for successful co-ordination among federal departments, although the emphasis will differ from arrangements with organizations outside the federal government.

6.29 No one approach is ideal under every circumstance, and the appropriate expectations will vary depending on the situation. Co-ordination is a means to an end. For some ends, co-ordination is crucial; for others, co-ordination is advantageous but not essential. As we noted in our 1998 review of progress on the federal Science and Technology Strategy:

> More co-ordination does not necessarily lead to better management of horizontal issues. In our view, effective management of any horizontal issue needs to include an action plan that orchestrates the relevant activities of departments and other players involved to achieve agreed-upon objectives; an accountability framework that transcends departmental jurisdictions; and a joint reporting mechanism to track results in relation to objectives.

6.30 We will describe each of the cases and highlight the key practices.

Renewing a Federal Strategy for Biotechnology

New demands were being placed on an old strategy

6.31 In 1983, the federal government announced the National Biotechnology Strategy, an initiative to promote biotechnology research and development. By 1996, this strategy was facing new stresses. The biotechnology industry had grown rapidly in size and maturity, and new commercial products were appearing on the market (see Exhibit 6.2). The House of Commons Standing Committee on Environment and Sustainable Development had called for a new federal

Exhibit 6.2

Biotechnology: Facts and Figures

What is biotechnology?

Biotechnology is defined as the application of science and engineering in the direct or indirect use of living organisms or parts or products of organisms in their natural or modified forms. Examples include vaccines and health diagnostic kits, herbicide-tolerant crops, and microbes used to clean up contaminated sites.

How much does the federal government spend on biotechnology?

The federal government spent $314 million on biotechnology in 1997–98. Roughly two thirds of that was on research in higher education institutions. Most of the rest was spent on internal research, primarily through the National Research Council Canada and Agriculture and Agri-Food Canada.

How big is the biotechnology industry?

There were 282 firms working on biotechnology in Canada in 1997, with total sales from biotechnology of $1 billion. Human health biotechnology led, carried out by 46 percent of firms, followed by agricultural biotechnology in 22 percent of firms.

How fast is it growing?

One estimate suggests that the global market for biotechnology products and services could more than double from $20 billion in 1995 to $50 billion in 2005. There were 9,800 people employed in biotechnology in Canada in March 1998. This is estimated to grow to 15,800 by 2001.

Source: Statistics Canada, Canadian Biotechnology Statistics, 1999

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Source: Statistics Canada, Canadian Biotechnology Statistics, 1999 approach to regulating the technology. As well, the public debate on biotechnology was heating up, fuelled by issues such as animal cloning, the labelling of genetically modified food and the approval of bovine growth hormone.

6.32 As a technology and as a set of issues, biotechnology cuts across the mandates and interests of over 20 departments and agencies. Industry Canada led the National Biotechnology Strategy, but other departments, such as Health Canada and Agriculture and Agri-Food Canada, are heavily involved in biotechnology issues. For example, the responsibility for regulating biotechnology is shared among four organizations (Environment Canada, Health Canada, Fisheries and Oceans, and the Canadian Food Inspection Agency). In the face of biotechnology's new profile, outside observers, the Privy Council Office and the departments themselves had raised concerns about the ability of the biotechnology "community" to respond effectively.

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6.33 In March 1997, Cabinet decided to revitalize the National Biotechnology Strategy. The renewal process was to include a new policy framework and improved mechanisms for interdepartmental co-ordination. The process was also to set out new approaches to address the emerging social, ethical and other concerns, including setting up a broad-based advisory committee. Following consultations during the spring of 1998, the new Canadian Biotechnology Strategy was announced on 6 August 1998. At this point, the government recognized that the Strategy was incomplete and committed to taking several further steps, including developing concrete action plans.

6.34 Our case study of the Strategy focusses on two main aspects of the renewal process: consultations leading up to the announcement, and the new mechanisms for interdepartmental co-ordination established shortly after the announcement. Our audit work considered the new secretariat that was created through the Strategy, as well as the seven core biotechnology departments (Industry Canada, Health Canada, Agriculture and Agri-Food Canada, Natural Resources Canada, Environment Canada, Fisheries and Oceans, and the Department of Foreign Affairs and International Trade). The Canadian Food Inspection Agency has also played a role as part of the Agriculture and Agri-Food Canada portfolio.

6.35 We have not considered events after January 1999 in any detail; however, we recognize that there have been several significant accomplishments since then. These include developing shared policy statements, preparing memoranda to Cabinet, and increasing the available funds. For example, the Canadian Biotechnology Strategy Fund supports departmental research (see Exhibit 6.3). A further $55 million was allocated in the 1999 Budget for federal research on genomics. Then the 2000 Budget committed a further $160 million to genomic research and $90 million to enhance the federal government's regulatory capacity. A full evaluation of these programs would be premature and was beyond the scope of this audit.

Consultation laid a base for the new strategy

6.36 When the decision was made to renew the Strategy, the Canadian Biotechnology Strategy Task Force was charged with co-ordinating the process. Industry Canada contributed the largest portion of the financial resources (29 percent), provided staff, and housed the Task Force offices. Other departments contributed financially and provided some staff time through secondments.

6.37 **Rushed consultation.** An ambitious schedule, laid out in August 1997, was intended to produce a renewed strategy for Cabinet by June 1998.

Departments had difficulty reaching agreement on the approach and the wording of the overall consultation document. Ultimately, several different modes of public consultation were combined, including round-table sessions run by the Task Force, low-key sectoral consultations run by the departments, focus groups, and discussions with provincial officials. The early difficulties resulted in short lead times for the consultations. This in turn affected who could participate and to what extent they could review documents before the consultation sessions. Some participants were concerned that the consultation was "being done more for form than substance."

6.38 The round tables contributed to achieving one of the primary objectives: validating the approach outlined in the consultation document. Participants were selected to reflect a range of interests, and discussion was focussed on three topics (the overall policy framework, the reporting relationships for the new advisory committee, and how the public was to be consulted). Most round-table participants were satisfied with their workshops; however, some key stakeholders were dissatisfied with the overall approach and the consultation summary. Many participants had high expectations that further, more extensive consultation would follow.

6.39 The new strategy was prepared for Cabinet as intended. The key factors contributing to its timely completion were clear direction from senior management, limited (and realistic) objectives, a division of responsibilities between the Task Force and the departments, and

Many participants in the consultations on the new Canadian Biotechnology Strategy had high expectations that further, more extensive consultation would follow.

Exhibit 6.3

Projects Supported by the Canadian Biotechnology Strategy Fund

The Fund provides for $9.5 million per year over three years from 1999–2000 to 2001–2002. Thirty-two items are funded, including a $3 million yearly allocation to the Canadian Biotechnology Secretariat and funds for corporate communications and emerging issues, under the control of the Secretariat. Much of the allocation to the Secretariat is to support the new Canadian Biotechnology Advisory Committee. The research projects include the following:

- Transgenic herbicide-resistant crops: environmental risk and the potential for new weed problems in Canada
- Effects of insecticidal proteins in transgenic plants on non-target organisms
- Labelling, engaging the public and meeting product information needs in the area of food biotechnology
- Development of national standards for transgenic animal health and safety assessments
- Championing the development, application and public acceptance of plant-based remediation and restoration technologies for contaminated site clean-up in Canada
- Environmental risk of transgenic insect resistance under Canadian field conditions
- Addressing international trade policy challenges and enhancing market access for Canadian agricultural biotechnology products
- International stewardship: capacity building in developing countries
- Assessment of transgenic fish for environmental risk and food safety
- Risk/benefit assessment versus risk/benefit perception of biotechnology products
- Three-year work plan for interdepartmental working group on ethics and public confidence in biotechnology
- Biotechnology for cleaner industrial production/climate change
- Proposal for a biotechnology statistics program
- Development of Canada's capacity to assess environmental safety of biotechnology-derived forest products

Source: Canadian Biotechnology Secretariat

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Source: Canadian Biotechnology Secretariat strong co-ordination by the Task Force and an interdepartmental management group.

New mechanisms were developed to manage horizontal issues

6.40 One of the goals of the renewal process was to develop improved interdepartmental mechanisms. These were intended to oversee implementation of the Canadian Biotechnology Strategy and to ensure rapid, responsive and co-ordinated management across government of horizontal issues related to biotechnology. We examined the mechanisms established shortly after the announcement of the Strategy to see whether they were consistent with effective interdepartmental co-ordination and whether a solid foundation had been laid for implementation.

Some officials said they were unaware of all of the committees and working groups under the Canadian Biotechnology Strategy.

6.41 New management structures. The Task Force evolved into a new focal point for activity, the Canadian Biotechnology Strategy Secretariat. There is a new team of ministers (co-ordinated by the Minister of Industry), a committee of deputy ministers, a committee of assistant deputy ministers, and a series of working groups. Another key part of the Strategy was the creation of an independent advisory committee, the Canadian Biotechnology Advisory Committee. Members of the Committee were announced in September 1999 — later than initially planned. This committee is intended to engage in a "conversation with Canadians" over the larger social, health and ethical issues and to advise the ministers involved with the Strategy.

6.42 Increased bureaucracy. We have several concerns about these new structures. In contrast to the intention of streamlining the committee structure, the number of committees and working groups increased from 15 to 30 with the new Strategy. (Additional new committees have subsequently been created to address issues such as the potential labelling of genetically modified food.) Some officials said they were unaware of all of the committees and working groups. The Secretariat itself could not provide us with a complete list of committee members or meeting times. While some core committees meet regularly and advance their agendas, we were also told that communication for some officials and organizations is hampered by the structure of the new strategy.

6.43 Unclear roles and responsibilities. The roles of the new team of ministers are not clear. (The team met for the first time only in February 2000.) There is uncertainty about the distinction between this team's responsibilities and those of line departments. Officials also told us that the boundaries between the responsibilities of the Secretariat and line departments are not well defined.

6.44 Administrative weaknesses. The new Secretariat serves several masters and faces many demands. As a focal point for biotechnology policy, we expected that it would be tracking the information flow among departments and maintaining accurate, up-to-date records. During our audit work, the Secretariat was unable to provide us with basic documentation such as a complete set of minutes of the deputy ministerial committee meetings, an organizational chart illustrating reporting relationships, and information about the financial contributions of different departments to the renewal process. We are concerned about the Secretariat's ability to provide accurate and timely information to departments and to administer the Canadian Biotechnology Strategy Fund properly.

6.45 The Canadian Biotechnology Secretariat should move immediately to address the gaps in its basic administrative procedures and records management.

Joint response: *The Canadian Biotechnology Secretariat (CBSec) and* *the interdepartmental community have a number of initiatives under way as part of their ongoing efforts to strengthen practices and address the identified concerns, including:*

- *an assessment of the Canadian Biotechnology Strategy (CBS) Working Group structure;*
- *a review of the organizational structure of the CBSec and its resource levels;*
- *implementation of an enhanced records management system; and*
- *implementation of a financial reporting system that is supporting managerial decision-making and reporting with regard to the CBS Fund.*

6.46 When the new Strategy was announced in August 1998, it contained 10 themes with possible actions. These themes ranged from building public confidence and awareness to regulating for health and environmental protection and to developing human resources. In the round-table consultations, participants called for a strategic approach to the development of biotechnology in Canada. This included the formulation of an action plan with specific measurable objectives and the evaluation and monitoring of progress toward these objectives. When the Strategy was announced, the federal government committed to developing concrete action plans for each of the 10 themes. We believe that Parliament and other Canadians need to know what the government plans to do with respect to biotechnology, and what progress it has made.

6.47 Departments participating in the Canadian Biotechnology Strategy should develop the promised concrete action plans for the strategic goals, including specific measurable objectives. They should also describe their plan for monitoring and reporting progress toward these objectives and their plans for evaluating the Strategy as a whole.

Joint response: *A two-year progress report of the Canadian Biotechnology Strategy (CBS) accomplishments to date and plans for the future will be developed and published later this year. The first phase of implementing the CBS focusses on two of the themes for concerted action that were identified through public consultations: strengthening the regulatory system and enhancing research capacity. The federal budgets of February 1999 and 2000 set aside funds in the fiscal framework for initiatives in these areas, and evaluation frameworks for these initiatives will be developed accordingly. In addition, the Canadian Biotechnology Advisory Committee (CBAC) has published its multi-year work plan, and an expert scientific panel under the Royal Society has been struck to assess the future science needs of the regulatory system.*

An evaluation framework that identifies key elements of an evaluation plan has been developed for the CBS as a whole. A resource plan and schedule is being developed for consideration by the Biotechnology Assistant Deputy Minister Committee by December 2000.

Transparency and accountability to the public are key components of the CBS. The Canadian Biotechnology Secretariat and the biotechnology departments maintain active Web sites and utilize other means of communication to disseminate information about their activities. However, these efforts will continue to be enhanced. Also, the CBAC will soon be engaging Canadians in a dialogue on biotechnology as part of its process for formulating advice to the government.

Parliament and other Canadians need to know what the government plans to do with respect to biotechnology, and what progress it has made.

Supporting First Nations Forestry Activities

New working relationships were needed

6.48 Many First Nations communities face daunting challenges. With high unemployment rates, rapidly growing populations and social stresses, creating economic opportunities is essential. Further, with half of the population under 25 years old, many young people have not yet entered the job market.

One of the key assets that First Nations can use to create new opportunities is their forested land.

6.49 One of the key assets that First Nations can use to create new opportunities is their forested land. Reserves contain approximately 1.4 million hectares in productive forest land. About 240 First Nations have more than 1,000 hectares of land on their reserves that have the potential for forestry development. With future land claim settlements, the amount of forest land under the control of First Nations will expand further.

6.50 The federal government initially supported First Nations forestry development through the 1984 Federal-Provincial Regional Development Agreements. The Indian Lands Forestry Program, administered by the Canadian Forest Service, focussed primarily on rehabilitation and developing management plans for on-reserve forests. The decision to terminate this program was announced in 1993 and reaffirmed in the 1995 Budget.

The management structure of the First Nation Forestry Program is organized to facilitate flexible program delivery.

6.51 Following pressure from First Nations and a program evaluation by Indian and Northern Affairs Canada, the Ministers of Natural Resources and Indian and Northern Affairs decided to jointly fund a new forestry program for First Nations with an emphasis on capacity building. The Canadian Forest Service was not in a position to fund the program by itself; Program Review had resulted in a cut to the Forest Service budget from $220.9 million in 1994–95 to $95.6 million in 1997–98. The Forest Service could supply the technical skills and the regional delivery; Indian and Northern Affairs would provide the majority of the funds. The agreement between the two departments was formalized in a memorandum of understanding in 1996 that established clear and complementary roles for the two departments.

6.52 This case study examines how well interdepartmental co-ordination works between Natural Resources Canada and Indian and Northern Affairs Canada and whether it is achieving the intended results. While several departments have crucial roles to play in enhancing opportunities for Aboriginal people (for example, Industry Canada and Human Resources Development Canada), we focussed on the two signatories to the memorandum of understanding.

Departments established clear objectives and roles

6.53 **Clear objectives.** The purpose of the First Nation Forestry Program is to "improve economic conditions in status Indian communities with full consideration of the principles of sustainable forest management." The program's objectives were specified in the memorandum of understanding and focussed on enhancing the capacity of First Nations to operate and participate in forest-based businesses, increasing First Nations co-operation and partnerships, investigating the feasibility of mechanisms for financing First Nations forestry development, and enhancing the capacity of First Nations to manage reserve forests in a sustainable way.

6.54 **Flexible management structure.** The program's management structure is organized to facilitate flexible program delivery. The National Management Committee includes one representative from each of Indian and Northern Affairs Canada, the Canadian Forest Service and First Nations. (The latter representative was chosen by First Nations representatives from the Provincial-

Territorial Management Committees.) The National Management Committee is responsible for the overall direction of the program and for providing guidance to the Provincial-Territorial Management Committees.

6.55 The Provincial-Territorial Management Committees, in turn, are responsible for administering, managing and implementing the program. The composition of the committees varies from province to province. For example, provincial or territorial representatives sit on seven of the committees. First Nations initially declined direct representation on the Quebec management committee.

6.56 The third part of the management structure, the Provincial-Territorial Management Committee Advisory Group, was added after the memorandum of understanding was signed. It has since evolved into an annual workshop for the Provincial-Territorial Committee members to share program experiences and best practices, as well as to interact with colleagues from across the country. This forum also provides First Nations with the opportunity to discuss the program and make recommendations to the National Management Committee on changes and improvements to the program.

6.57 The details of the roles and responsibilities of the two signatory departments, at both the national and provincial/territorial levels, are specified in a manual of standards and procedures. This flexible structure and the involvement of both the Canadian Forest Service and First Nations means that decisions are made openly and are supported by key players.

6.58 Initial co-ordination was achieved quickly because the program goals had strong support from senior management. Departments co-operated well on management committees at both the national and provincial/territorial levels.

The Blood Tribe Reserve in southwest Alberta is the largest reserve in Canada, with a total area of approximately 145,000 hectares. Funding led to the development of a reserve forestry management strategy, including a study of traditional land use and the hiring of Aboriginal summer students to assist with preparing an inventory of archaeological sites. Another project in Alberta combined a wildfire-fighting course with industry training intended to increase stable employment opportunities on the reserve (see paragraph 6.49).

Funding has been applied to forestry operations throughout Canada. The program has increased First Nations' technical capacity to carry out activities such as silviculture, tree planting, log building construction, and tree nursery operations. It has also supported business feasibility studies and geographic information system technician courses (see paragraph 6.53).

Source: Photoscourtesy of First Nation Forestry Program

6.59 The program was also intended to be a partnership venture with First Nations, including them as both delivery agents and program beneficiaries. The value of First Nations identifying their own priorities and needs has been emphasized repeatedly by First Nations (and by the Auditor General in previous reports). Their involvement, along with that of other stakeholders, was essential to credible implementation. First Nations were expected to contribute financially to project costs and to obtain additional funding from the private sector where possible.

The First Nation Forestry Program has been very successful in obtaining additional complementary funds.

Support from other organizations exceeded expectations

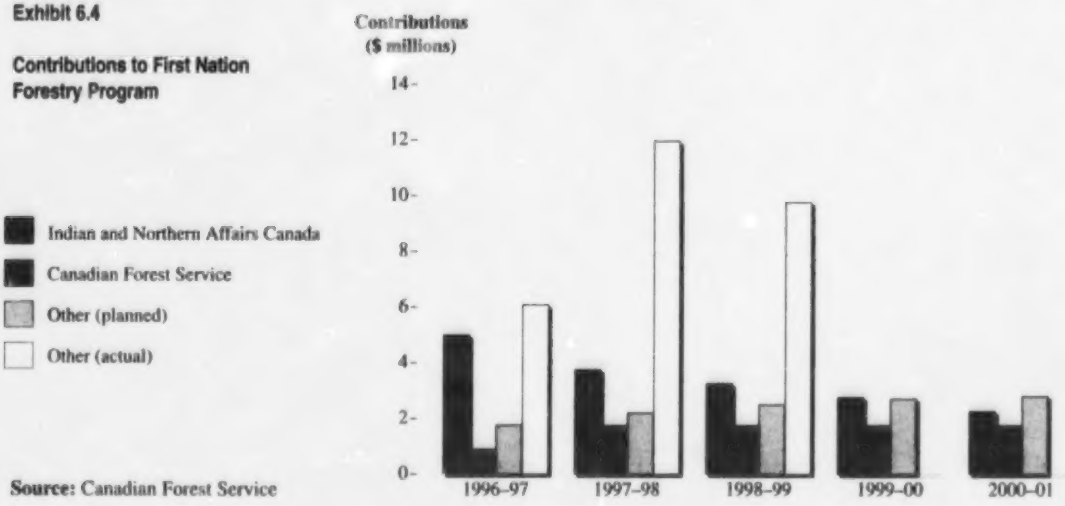
6.60 Overall, the program has been very successful in obtaining additional funds to complement the resources supplied directly through the program (see Exhibit 6.4). The funds obtained from additional sources were $21 million beyond initially planned levels for the first three years of the program. We have been informed that this trend has continued for a fourth year.

6.61 A significant fraction of these additional resources ($3.3 million over the first three years) came from other federal departments (in particular, Human Resources Development Canada and Industry Canada, through Aboriginal Business Canada) and from other Indian and Northern Affairs programs (such as the Resource Access Negotiations Program). This suggests that if the First Nation Forestry Program is extended beyond its planned five-year horizon, representatives of complementary departments and programs should be involved in its redesign to ensure that the program operates as an integrated package to achieve the best overall results for its clients.

6.62 The interim evaluation report for the program (which was required by the memorandum of understanding) signalled that greater co-ordination is required among related programs. Specifically, it recommended increased compatibility among programs. This would facilitate the transition as "clients" graduated from the First Nation Forestry Program to other programs. It would also streamline administration and monitoring so that clients could satisfy more than one source of funding without a daunting amount of work.

Exhibit 6.4

Contributions to First Nation Forestry Program



Source: Canadian Forest Service

6.63 Despite the success at capturing additional resources, the program may be a victim of its own success. While First Nations' expectations are high, the number of proposals and their dollar value have been dropping over the past three years. We were told that this is partly due to the perception that funds are limited and demand for funds is high.

Departments have an opportunity to rethink their approach

6.64 **Limited information for learning from past experience.** Although the First Nation Forestry Program has been highly successful at leveraging funds and there is considerable interest in the program, increased follow-up is needed to determine if the program is actually achieving the intended results. There is no systematic tracking of the long-term impacts of the program. Monitoring of results is needed at both the program and the individual project levels to ensure that all partners can assess what works and what does not.

Monitoring of results is needed at both the program and individual project levels.

6.65 The interim review of the program concluded that the expected outcome will not be achieved: First Nations will not be able to assume full responsibility for forestry program activities by 31 March 2001. With the annual funding allocation for 609 bands decreasing from $5.9 million in 1996–97 to $4.0 million in 2000–01, it may have been too ambitious to expect an outcome of complete self-reliance at the end of five years.

6.66 The complementary roles and the clear specification of functions, responsibilities and processes have contributed to an effective working relationship between the two signatory departments and with the key stakeholders. Several participants suggested that this program delivery model could be applied to other First Nations programs. If it is, such programs need to ensure that they clearly reflect the priorities of Aboriginal people and acknowledge the complex and shifting relationship between First Nations, government and Canadian society.

Buying "Green" in the Federal Government

Procurement has significant environmental and economic consequences

6.67 Governments around the world have recognized that they can promote sustainable development by reducing their consumption and by creating a demand for goods and services that have a reduced impact on the environment. In Canada, federal expenditures for goods and services that could be subject to some level of "greening" exceeded $14 billion in 1998–99 (see Exhibit 6.5).

6.68 There are substantial direct environmental benefits possible from greening federal procurement; these include reduced energy use, water consumption, solid waste generation and emissions. By buying goods and services that do not contain harmful substances, the federal government can lower the costs of hazardous waste disposal, minimize the risks and costs associated with spills, and reduce potential liabilities from contaminated sites. Given that the federal government is the single largest purchaser in Canada, it can also help set the standards for other public sector and private sector buyers.

6.69 The federal government will not get the best value for its purchases unless departments take a co-ordinated approach, making effective use of standing offers and volume discounts. Procurement officers and potential suppliers must receive a clear and consistent message. In our view, central co-ordination is required to realize these economies of scale and to avoid inconsistency.

Central co-ordination is required to realize economies of scale and to avoid inconsistency.

6.70 This case study examines how departments have worked together to reduce the environmental impact of their purchases. Procurement is an issue for all federal departments; however, in our audit work we focussed on three key players: the Treasury Board Secretariat, Public Works and Government Services Canada, and Environment Canada.

The federal government has made repeated attempts to co-ordinate

6.71 **Environmental Choice Program.** There have been several attempts over the past decade to promote the adoption of green procurement within federal departments and agencies. In 1988, Environment Canada began the Environmental Choice Program, a program to help purchasers identify which products were "green" by marking them with the EcoLogo™ symbol. In 1995, an independent firm was contracted to deliver the program. This program has the potential to assist co-ordination by providing a common basis for selection by federal procurement officers. While progress has been made in certifying a broad range of products, the overall use of EcoLogo™ products has been quite limited.

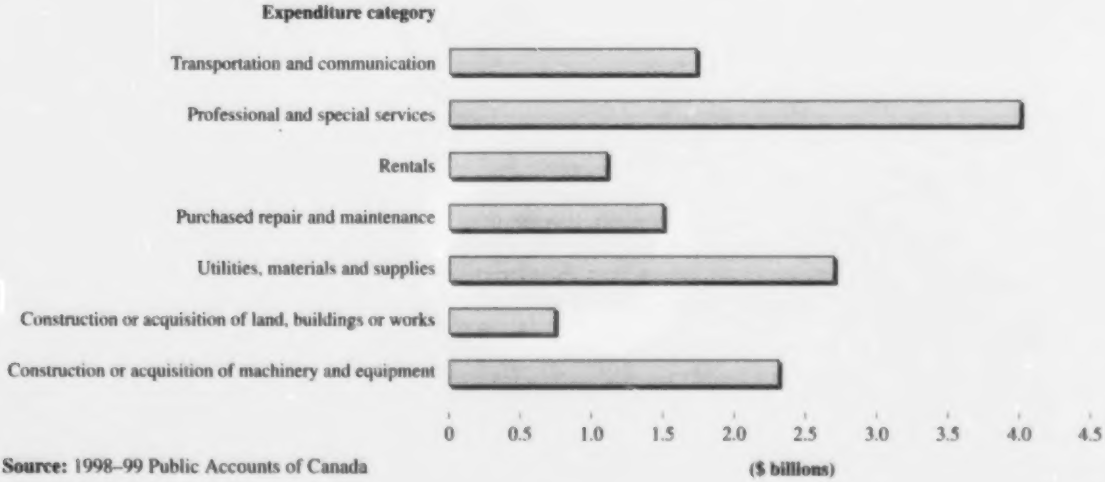
6.72 **Environmental stewardship.** As part of the 1990 Green Plan, the federal government introduced the Code of Environmental Stewardship to, among other things, "ensure that environmental considerations are integrated into purchasing policies and practices." The Office of Federal Environmental Stewardship, a key co-ordination mechanism for implementing the Code, was closed in 1997.

6.73 In 1995, the Federal Committee on Environmental Management Systems was established. An important part of its role is to "demonstrate leadership in the development and implementation of environmental management systems which further sustainable development and support the commitments of the Code of Environmental Stewardship." The Committee has acted as a means for departments to exchange information about environmental management systems and other related issues, but has paid relatively little attention to procurement.

6.74 **Environmental Accountability Partnership.** The Environmental Accountability Partnership was an

Exhibit 6.5

Federal Expenditures Potentially Subject to "Greening"



Source: 1998–99 Public Accounts of Canada agreement signed in 1992 between Environment Canada and the Treasury Board Secretariat to improve co-ordination and the exchange of information on greening operations. In 1994, a committee of deputy ministers directed the signatories to work with departments to establish a work plan for green procurement, including clear collective goals and indicators. The Partnership is no longer functioning. As demonstrated by these initiatives, the federal government has provided only sporadic support for green procurement.

The federal government has provided only sporadic support for green procurement.

The lack of co-ordination continues, but there are some promising signs

6.75 Missing and inconsistent policies. The current Treasury Board guidelines for procurement offer very general guidance about including environmental factors in purchasing decisions. Some departments have recognized that greening their operations is "plainly obligatory" and have gone beyond the Treasury Board guidelines to prepare more detailed procurement policies; however, the approaches are inconsistent and most departments do not have policies. This is clearly an area that would benefit from effective co-ordination.

6.76 Inconsistent priorities and targets. We reviewed the first sustainable development strategies and found that 82 percent of departments included objectives and actions for green procurement. Actions included developing purchasing guides, outlining procedures and protocols, and preparing resource information and tools. Departments have identified different priorities and targets, and the lack of co-ordination poses a significant risk of unnecessary and wasteful duplication across departments.

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6.77 Unclear roles and responsibilities. We found that no department sees itself as the lead organization for developing a more consistent and coherent federal approach to "green" procurement. From the perspective of departments, the Treasury Board Secretariat's role is to establish a strategic vision for the government. At a workshop in 1998, departments concluded that success depended on strong leadership in central policy development and co-ordination. In contrast, according to its officials, the Treasury Board Secretariat's role is one of facilitation — assisting lead departments in clarifying expected outcomes and advising on the co-ordination process. From the perspective of the Treasury Board Secretariat, Environment Canada should be leading on this issue. Without clear accountability, there is a significant risk that nothing will be done.

6.78 In Chapter 2 of this Report, we reviewed the progress of departments on greening all aspects of their operations. We documented several critical issues, including the lack of leadership, inconsistent approaches across departments, and incompatible measures of progress.

6.79 New initiatives. Four separate initiatives were launched in 1999 that could lead to progress on green procurement. First, as part of the commitment to reduce greenhouse gas emissions, Environment Canada and Natural Resources Canada are leading a federal "house in order" effort to implement purchasing that considers energy efficiency and greenhouse gas implications. This includes purchases of "green" power. Second, as part of co-ordinated planning for sustainable development, Public Works and Government Services Canada is leading an initiative for sustainable government operations that includes consideration of procurement. Third, the Treasury Board Advisory Committee on Contracting has recommended the formation of an interdepartmental working group to explore ways to advance sustainable development through green procurement.

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Finally, Public Works and Government Services Canada has contracted with an Aboriginal firm for the development of an environmental information service. The service will be owned and maintained by the contractor and will provide information on suppliers of goods and services typically purchased by the federal government.

There is a lack of clear overall direction and a lack of mutually agreed-upon roles and responsibilities.

6.80 Despite these new initiatives and their potential impact, fundamental problems remain. There is a lack of clear overall direction and a lack of mutually agreed-upon roles and responsibilities. The time lines are short, different departments are leading separate and overlapping processes, and reporting structures vary. It appears that some key lessons from past efforts have not been learned. In our view, these new initiatives will be unlikely to succeed unless there is effective co-ordination, led by the Treasury Board Secretariat. No other organization combines a government-wide perspective with the potential to influence departmental operations.

6.81 The Treasury Board Secretariat should co-ordinate and support implementation of a government-wide strategy for green procurement, with clear, time-bound targets and a shared reporting framework.

Treasury Board Secretariat's response: *The Treasury Board Secretariat (TBS), through its Advisory Committee on Contracts, established an interdepartmental working group in September 1999 to examine the needs of the federal government in this area and recommend a common basis for moving forward. It must be recognized that this initiative is a collaborative one and that TBS will develop appropriate policies or guidance in accordance with the findings and recommendations of the Committee and in consultation with all departments.*

6.82 Progress in other countries. In Canada, departments point to obstacles to environmentally sound purchases. These include the possible implications for international trade agreements, the need to define "green" and to understand the cost implications, and the need for access to

Exhibit 6.6

Targets for "Green" Procurement in the United Kingdom

In 1999, the Department of the Environment, Transport and the Regions (DETR) in the United Kingdom established a comprehensive "greening government operations" policy to be followed by departmental staff. This policy has clear objectives, roles and responsibilities, timelines, and monitoring and reporting requirements. The sharing of information and lessons learned is also a requirement under the policy.

The policy sets clear and measurable targets in several areas, including the following:

Energy

- Reduce by 20 percent from 1990–91 levels by March 2000.
- Buy a minimum of 10 percent of electricity from renewable sources by March 2002.

Waste

- Recover a minimum of 40 percent of total office waste with at least 25 percent coming from recycling or composting by 2000–01.
- Increase the amount recovered and recycled by 10 percent each year to achieve 70 percent recovery or recycling in 2003–04.

Paper

- Buy 100 percent recycled paper comprising at least 80 percent genuine post-consumer waste and use this for all work not requiring specialist papers.

The policy identifies the division within DETR that will co-ordinate and promote the policy and will publish an annual progress report. The progress report will be available on the DETR Web site and will be made available to all staff.

Source: Department of the Environment, Transport and the Regions, United Kingdom

Finally, Public Works and Government Services Canada has contracted with an Aboriginal firm for the development of an environmental information service. The service will be owned and maintained by the contractor and will provide information on suppliers of goods and services typically purchased by the federal government.

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Source: Department of the Environment, Transport and the Regions, United Kingdom the necessary information about products. Other countries, such as the United States and the United Kingdom, have made progress despite similar obstacles. For example, the Department of the Environment, Transport and the Regions in the United Kingdom has committed to detailed targets for greening its procurement (see Exhibit 6.6). In the United States, the Office of the Federal Environmental Executive has been tracking compliance since 1992 with the requirement to spend federal funds on recycled goods (including paper, building insulation, oil and tires).

Negotiating a Biosafety Protocol

Countries have negotiated a new protocol to protect biodiversity

6.83 On 29 January 2000, after 10 long days of debate, negotiation and compromise in Montreal, delegates from 138 countries agreed to an important new protocol under the Convention on Biological Diversity. This contrasted with the situation less than a year earlier in Cartagena, Colombia, where the representative for the Canadian delegation announced that Canada and a small group of other countries did not agree with the proposed text of the protocol and the formal talks were suspended.

6.84 The protocol in question was the Biosafety Protocol. The objective of the Protocol is to set international rules for the transboundary movement of living genetically modified organisms that may adversely affect the conservation and sustainable use of biodiversity. The Protocol is based on the concept of advanced informed agreement, in which countries will consider the potential for adverse impacts on their biodiversity before they import a living genetically modified organism for introduction into the environment. While the Protocol is intended to reduce environmental impacts, it could also restrict international trade, depending on how it is implemented.

6.85 For this case study, we examined the interdepartmental working group that was established to develop Canada's negotiating position for the latest meeting at Montreal and for earlier meetings. (Chapter 2 of our May 1998 Report outlined the process for preparing an international negotiating position.) The working group was co-chaired by Environment Canada and the Department of Foreign Affairs and International Trade. More than 12 departments and agencies were involved in the working group; however, we focussed on the key players (Department of Foreign Affairs and International Trade, Environment Canada, Agriculture and Agri-Food Canada, Canadian Food Inspection Agency, Industry Canada, Health Canada, Natural Resources Canada, and Fisheries and Oceans).

Departments worked with very high stakes, uncertainty and conflicting perspectives

6.86 Potential economic impacts. Exports are a major source of revenue for Canadian farmers, accounting for $22.6 billion of sales in 1998. Genetically modified crops constituted a relatively small proportion of this amount (roughly $840 million or four percent); however, because Canada's bulk commodity handling and transportation system is not currently equipped to segregate genetically modified varieties from the non-modified varieties, all exports of those crops ($2.8 billion) could have been affected. For some crops, the proportion of the total harvest coming from genetically modified varieties has grown dramatically (see Exhibit 6.7). For other crops, such as wheat and barley, there are no genetically modified varieties that are commercially grown, although research is under way to create such strains. Canada's current agricultural policy calls for a rapid increase in exports, and biotechnology could play a key role in meeting this objective.

The Biosafety Protocol, while intended to reduce environmental impacts, could also restrict international trade.

6.87 Potential environmental risks. The potential environmental risks associated with the movement of living genetically modified organisms arise from the possibilities of imported organisms breeding with native species, invading habitat and competing with existing species, and promoting herbicide resistance. The major concern is for developing countries with weak or nonexistent regulatory systems. The magnitude of the risk will depend on the nature of the traits introduced and how regulatory systems in the importing countries are implemented.

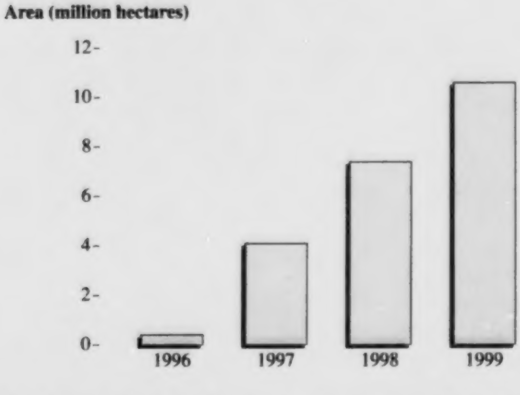
There is a high level of uncertainty about both the potential environmental risks and the potential impacts on trade of the Biosafety Protocol.

6.88 International reputation at stake. Since 1992, Canada has played a key role in the Biodiversity Convention, facilitating the agreement, ratifying it early, and providing the location for the Biodiversity Convention Secretariat in Montreal.

6.89 Uncertain consequences. There is a high level of uncertainty about both the potential environmental risks and the potential impacts on trade of the Biosafety Protocol. Federal departments had to work together to make policy choices in the face of these uncertainties.

Exhibit 6.7

Area of Genetically Modified Canola Grown in Canada



Canada is one of the three largest exporters of genetically modified crops. The primary genetically modified crops are canola, soybeans, corn and potatoes. Canola is the largest in terms of area and value, but all four have demonstrated rapid increases in area planted. The estimated area for 1999 of genetically modified canola corresponds to 77 percent of the total area planted to canola.

Source: Agriculture and Agri-Food Canada

6.90 Conflicting perspectives. The nature of this issue brought departments into conflict. Environment Canada has a mandate to co-ordinate "the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the environment", and the Department leads on implementation of the Biodiversity Convention. On the other side, Industry Canada's legislation calls on it to "increase the international competitiveness of Canadian industry, goods and services." The objectives of the new Canadian Food Inspection Agency are to facilitate trade in food, animals, plants and their products and "to contribute to the continuing health of animals and plants for protection of the resource base." The Department of Foreign Affairs and International Trade has a mandate to "foster the expansion of Canada's international trade and commerce", including by "improving the access of Canadian produce, products and services into external markets through trade negotiations." It is also responsible for conducting and managing Canada's international relations. The mandate of Agriculture and Agri-Food Canada is to help the agricultural sector maximize its contribution to Canada's economic and environmental objectives, and the Department has promoted agricultural exports.

6.91 While respecting the environmental objectives of the Biosafety Protocol, the final negotiating position at both Cartagena and Montreal strongly reflected Canada's trade concerns. Our concern is not about the conflicting perspectives of departments and the resulting debate, but rather with how the process was managed.

"Sawing through thick boards"

6.92 Unlike most other countries, Canada has taken an inclusive approach to developing its negotiating position. At the meetings in Cartagena, Canada had a larger and more broadly based delegation than almost all of the 130 countries participating in the meeting. Over 40 percent of the other countries were represented by a single individual from an environment ministry. The Canadian delegation included representatives with the perspectives of environmental protection, regulatory systems, trade policy, health concerns, and agricultural producers. In addition, the working group sought the input of external stakeholders through advisory groups, and included stakeholder representatives in the official delegation.

6.93 Difficult and demanding process. Participants described the interdepartmental process as long, difficult and tense. They told us of frequent, day-long meetings, especially as the final deadlines approached, making it hard to consult within departments and develop alternatives. At the same time, participants did not always have the "luxury of time to listen to one another", nor the incentive to adopt a corporate perspective as opposed to negotiating from narrow departmental views. Relevant documents were sometimes available only just before meetings, allowing little time for review.

6.94 Several other factors contributed to the difficulty of the process. Participants said that there was often a lack of strategic focus to the discussion; while the overall goal was clear, the steps to get there were not. We were told that agendas were sometimes not used or not adhered to. For some issues, participants did not agree on the basic scientific or trade policy facts. Uneven participation by key players and a high turnover rate also disrupted the dynamics of the group.

6.95 Dispute resolution. Participants also told us that disputes within the working group were not always resolved effectively. A lack of senior management attention hampered dispute resolution, especially in the early stages of the group's work. In some instances, disputes among departments went from the senior analysts in the working group directly to their ministers. In the period leading up to the successful conclusion of international negotiations, the involvement of deputy ministers did promote a more flexible Canadian position. Central agencies facilitated the final agreements that were reached prior to the Cartagena and Montreal meetings, in particular by involving senior political levels.

Participants described the interdepartmental process as long, difficult and tense.

The conflict stems from the tension between trade and environmental agendas

6.96 This particular case study illustrates a larger concern for the federal government. Conflicts between environmental and trade policy objectives are likely to increase. The scope and number of international environmental agreements are growing (see our May 1998 Report, Chapter 2). Negotiators have looked to trade measures as a key tool to make these agreements effective. The scope of trade agreements, such as those under the World Trade Organization, is also growing.

6.97 In its report prior to the 1999 Seattle round of negotiations of the World Trade Organization, the Standing Committee on Foreign Affairs and International Trade commented:

> There is little doubt that ever-increasing flows of traded goods and services and investment impinge on the state of the world's environment, affect the quality of human and other forms of life, and put in question the sustainability of prevailing economic patterns of production, consumption, and exchange. The stakes are very high

In some instances, disputes among departments went from the senior analysts directly to their ministers.

and the rationale for collective action is strong, even if consensus is often difficult to achieve.

6.98 In its response to the Committee's report, the government said that the Department of Foreign Affairs and International Trade would co-ordinate policy formulation through consultation with a broad range of departments. While the negotiation of the Biosafety Protocol was ultimately successful, both domestically and internationally, we believe a more strategic approach is needed — one that can also promote effective dispute resolution.

6.99 Environment Canada and the Department of Foreign Affairs and International Trade should work together to enhance existing mechanisms to ensure that Canada's trade and environment agendas support each other. These mechanisms should address the need for strategic oversight, proactive analysis, tracking of individual negotiations and dispute resolution.

Joint Environment Canada and Department of Foreign Affairs and International Trade response: *The Biosafety Protocol negotiation has brought out more clearly than any before it the trade-environment dynamics, coupled with the need to address developing country concerns. This was a highly complex negotiation both from the perspective of the scientific issues as well as the trade and foreign policy concerns.*

The Department of Foreign Affairs and International Trade and Environment Canada agree that effective interdepartmental processes to arrive at policy consensus are necessary. Our departments are committed to working together to enhance existing mechanisms to ensure that Canada's trade and environment agendas are mutually supportive.

Assessing the Aquatic Effects of Metal Mining

Regulations are a key tool to protect fish habitat

6.100 The minerals and metals industry (including metal fabrication) contributed approximately $27 billion to Canada's gross domestic product in 1998 and employed over 365,000 Canadians. At the same time, the extraction and milling of mineral ores from underground and open pit mines can generate effluent high in acidity and dissolved metals — effluent that can kill fish and adversely affect fish habitat. The nature of the impacts varies from mine to mine, depending on the native ores, the mining technology and the surrounding environment.

6.101 The Metal Mining Liquid Effluent Regulations were promulgated in 1977 under the *Fisheries Act* to protect fish and fish habitat from the potential impacts of mining activity. The Regulations were developed between 1973 and 1977 with consultative input from a federal-provincial-industry task force.

6.102 The 1990 Green Plan contained a commitment to "update and strengthen" the Regulations. In May 1992, Environment Canada sponsored a workshop to discuss the process for revising the Regulations and to seek guidance from representatives of all groups with a stake in the environmental effects of mining effluent. The first phase of the revisions was to assess the effectiveness of the existing scientific basis for the Regulations and recommend changes.

6.103 This case study examined the consultative process used to develop recommendations for revising the Regulations. The process was known as the AQUAMIN (Assessment of the Aquatic Effects of Mining in Canada) process. It was co-chaired by Environment Canada and the Mining Association of Canada. Four other federal departments and agencies participated (Natural Resources Canada, Fisheries and Oceans, Indian and Northern Affairs Canada, and the Atomic Energy Control Board). In addition, provincial officials, mining industry officials representing the Mining Association of Canada, environmental groups and First Nations organizations contributed their expertise and perspectives.

Good planning and a neutral secretariat facilitated achieving objectives

6.104 **A solid plan.** The process began in June 1993 with a planning meeting to solicit stakeholder input on the design of the process. Through the meeting, participants established clear objectives and a schedule, scope and process for conducting the science assessment. The meeting laid a solid planning base for the remainder of the process, clearly identifying the roles and responsibilities of the different players. The process also allowed sufficient time to build trust among the participants.

6.105 A series of working groups was struck, addressing the necessary elements of the science assessment that was to be the basis for recommending changes. Federal departments and agencies participated in the working groups as well as in the steering group that oversaw the process. Working group members produced the necessary scientific summaries from the different regions of the country, reflecting the different mining conditions. A multi-stakeholder workshop brought together the scientific work and clarified the possible recommendations, which were input to two other working groups charged with preparing final recommendations (see Exhibit 6.8). The objectives of the process were achieved and all participants supported the package of recommendations in the final report of April 1996.

6.106 **Neutral secretariat.** Several factors contributed to this success. Environment Canada provided an effective secretariat — one that participants viewed as neutral and that focussed on sharing information and project management. The Environment Canada co-chair for the process had a scientific and monitoring background, which contributed to a perception of neutrality and to acceptance by participants. The inclusion of a co-chair from the Mining Association of Canada led to greater industry acceptance of the final recommendations.

6.107 Other federal departments were also instrumental. For example, because of their past work and good relations with the mining industry representatives, Natural Resources Canada officials were able to play a bridging role between Environment Canada and the industry on several more difficult issues. In addition, there was good co-ordination between the science assessment of the environmental effects of mining and the parallel work by Natural Resources Canada on developing effluent control technologies and evaluating ways to assess the impacts of effluent.

The process to update the Metal Mining Liquid Effluent Regulations began by asking stakeholders for their input.

6.108 **Effective dispute resolution.** Disputes were resolved largely within the working groups and the multi-stakeholder steering group. There were instances, however, when working groups were unable to resolve differences internally. They then followed the steps outlined in the terms of reference for the consultation process, taking the issue first to the group acting as an umbrella for the working groups. If resolution was not possible there, they then turned to the steering group for the overall AQUAMIN process. Outside help was used to address some disputes that were not resolved by the steering group. For example, when the first draft of the final report was released, there were several issues on which stakeholders could not agree. A professional facilitator worked with participants to uncover the real issues and propose avenues for solution.

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There were some cases where federal officials openly disagreed.

6.109 Federal officials agreed on most issues; however, there were some cases where they openly disagreed. For example, Environment Canada and Fisheries and Oceans supported a requirement for nonacutely lethal effluent and confined mine tailings. Natural Resources Canada disagreed. Beyond the many discussions among federal officials, there was no attempt to reach a common federal position on the recommendations. Given the emphasis on scientific debate in the process leading to recommendations for regulatory changes, we concluded that open disagreement among federal officials on scientific and technical issues within their areas of expertise actually helped support an open and credible process. (This situation contrasts with that described in our audit of toxic substances, reported in May 1999, where "the behaviour demonstrated by some departments is a major impediment to the effectiveness of federal programs.")

6.110 Sufficient resources. Departments contributed not only through the participation of their officials but also financially. The four major departments (Environment Canada, Natural Resources Canada, Fisheries and Oceans, and Indian and Northern Affairs Canada) shared most of the costs ($435,000 over three years). The Mining Association of Canada contributed 22 percent of the total cost, reflecting its stake in a workable set of recommendations.

Exhibit 6.8

A New Co-operative National Environmental Protection Framework

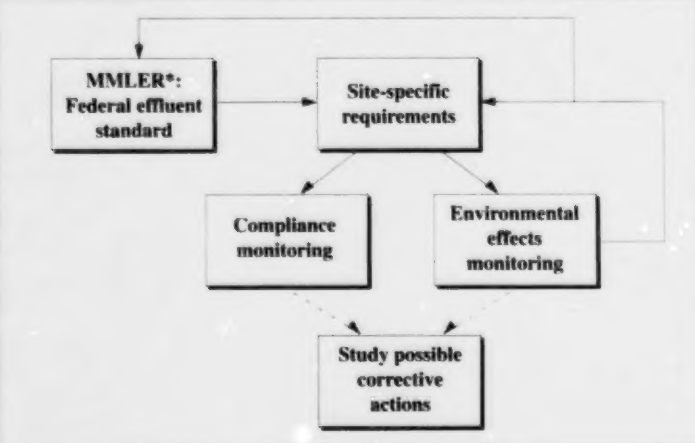
The process examining the regulations for metal mining effluent led to several recommendations. One was that a co-operative national environmental protection framework be implemented and include three components:

Metal Mining Liquid Effluent Regulations*: federal regulations to ensure a consistent, minimum quality of effluent being discharged to aquatic ecosystems.

Site-specific requirements: more stringent site-specific requirements that may be necessary to ensure adequate protection of some aquatic ecosystems.

Environmental effects monitoring: a feedback loop providing information to decision-makers and the public regarding the effectiveness of both environmental protection measures and long-term regulatory strategies.

Effective implementation of all three components of the framework is essential to achieve the overall objective. Monitoring of compliance and environmental effects could lead to the study of possible corrective actions. The relationship among the components is illustrated below.


MMLER*: Federal effluent standard
Site-specific requirements
Compliance monitoring
Environmental effects monitoring
Study possible corrective actions

Source: Assessment of the Aquatic Effects of Mining in Canada: AQUAMIN, Final Report, 1996

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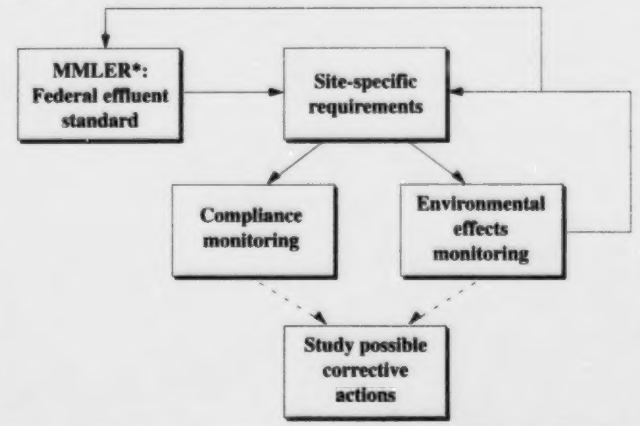
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Federal effluent standard
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Lessons were learned from past experience

6.111 The process selected for the science assessment reflected the lessons learned by Environment Canada and Fisheries and Oceans following the introduction in 1990 of a program for monitoring the environmental effects of pulp and paper mills. There was little consultation prior to the announcement of that program. Industry stakeholders felt that the information demands and the costs of compliance were excessive and not justifiable. In response, senior officials at Environment Canada had to intervene and begin a stakeholder consultation process.

6.112 Environment Canada still faces important challenges in implementing the recommendations. The lead responsibility has moved within the Department, bringing in new people and group dynamics. Participants in the original working groups have high expectations that the recommendations made in the final report will be respected in the implementation phase. This situation points to the need for effective intradepartmental co-ordination as an essential complement to good interdepartmental co-ordination.

Working Together on Sustainable Development Strategies

Departments had problems co-ordinating on their first try

6.113 **Two major co-ordination challenges.** Under the amendments to the *Auditor General Act* in 1995, departments are required to prepare sustainable development strategies and update them every three years. With the first strategies, which were tabled by December 1997, departmental officials had to confront new and unfamiliar demands. They had to struggle with the challenge of co-ordination within their departments, ensuring that each part of the department understood the implications of sustainable development for its own activities. They also had to collaborate with other departments to ensure that there was a common approach to shared issues.

6.114 Departments did not co-ordinate effectively in some important ways. They presented inconsistent views of sustainable development. The areas they identified as needing co-ordination were not mutually acknowledged. Except for a few limited examples, they did not co-ordinate their consultation efforts (see our May 1999 Report, Chapter 2). As a result, different departments often consulted the same representatives of interest groups on related issues. Where departments did work together, the efforts were ad hoc and based on the initiatives of committed individuals, rather than on senior management direction.

6.115 For this final case study, we examined the Interdepartmental Network on Sustainable Development Strategies and the role it played in laying a base for the second round of sustainable development strategies. The Network was established in 1996 and has served departments by creating a forum for information exchange, discussion and consultation. It continues to be a primary mechanism of interdepartmental co-ordination for sustainable development strategies. All of the departments and agencies that have prepared sustainable development strategies have participated in the Network at one time or another. Environment Canada acts as the chair and secretariat.

Co-ordination has improved in the second round

6.116 Partly in response to comments from the Commissioner of the Environment and Sustainable Development, there is greater emphasis on interdepartmental co-ordination in the second round of strategies, to be tabled by December 2000. Departments are working on some obvious areas of overlap. The

Environment Canada still faces important challenges with implementing the recommendations for revising the Metal Mining Liquid Effluent Regulations.

With the first sustainable development strategies, departments did not co-ordinate effectively in some important ways.

Network has provided a focus and showcase for these efforts, as well as trying to address a longer-term strategic agenda.

6.117 Stronger senior management support. A key factor in this second round of strategies has been increased senior management attention. The 12 October 1999 Speech from the Throne highlighted environmental quality. The Sustainable Development Co-ordinating Committee, a committee of deputy ministers from 14 departments, has helped bring focus to some of the interdepartmental efforts and is now overseeing a co-ordinated planning approach to eight sustainable development themes.

A key factor in the second strategies has been increased senior management attention.

6.118 Co-ordination on consultation. With the support of the Privy Council Office and on behalf of the federal government, the National Round Table on the Environment and the Economy convened a government-wide consultation on 4 April 2000, in Ottawa. Discussions centred on broad sustainable development issues, including the eight theme areas mentioned in the previous paragraph. Smaller groups of departments are considering how to co-ordinate their consultations around specific issues. Indian and Northern Affairs Canada is leading an effort to prepare a federal sustainable development strategy for northern Canada and consultation is a key part of this effort (see Exhibit 6.9).

The success of the voluntary Interdepartmental Network on Sustainable Development Strategies depends on committed and experienced individuals.

6.119 Other initiatives under way. Under the Network's umbrella, departments have prepared a common framework for organizing their sustainable development strategies. Few departments have so far committed to using the framework, but it could help departments identify areas of policy overlap and inconsistency. As a second initiative, in its sustainable development strategy Human Resources Development Canada committed itself to "help define the social dimensions of sustainable development." Other departments, notably Canadian Heritage, have led the attempt to jointly clarify the social and cultural aspects of sustainable development.

The Network must grapple with continuing challenges

6.120 A commitment threshold. The success of this voluntary network depends on committed and experienced individuals and the Network's ability to provide continuing value to its members. Individuals and departments are free to choose at what level of seniority, authority, frequency of attendance, level of engagement and financial commitment they will participate. There is no means, however, of requiring departments to follow through on their commitments. While providing a needed forum for information exchange, this mechanism is not as well-suited to a more formal, task-oriented form of co-ordination such as ensuring that all departments co-ordinate their consultations.

6.121 Unclear reporting relationships. Federal departments have formed committees at different management levels to address a variety of environmental and sustainable development issues (see Exhibit 6.10), but the reporting relationships have not yet been well defined. For example, although the Network has close links with the task force of assistant deputy ministers, it does not formally report to a senior committee. This creates a risk of duplication and gaps, and results in a lack of accountability.

6.122 Unequal cost sharing. Environment Canada, as secretariat for the Network, bears most of the costs of managing the process. It has played a key role in building trust among participants, although with the present structure, the Network's success depends on Environment Canada to donate the necessary resources. Resources could also come from other departments.

6.123 High turnover. Uneven participation and turnover have hampered effective functioning. We estimated that only one third of current participants in Network meetings had experience with the first round of sustainable development strategies. Some departments have no staff with such experience. Turnover has three possible consequences: it requires time to brief newcomers during meetings; it reduces the quality of discussion because participants do not have the relevant background; or it requires departments (or committees) to maintain detailed records and track lessons learned.

6.124 Overall, we believe that co-ordination through the Network and through related committees will be essential to managing the decentralized approach the government has taken to sustainable development. If the federal government moves to a more integrated approach, alternative mechanisms for co-ordination may need to be considered.

Uneven participation and turnover have hampered effective functioning.

Learning the Lessons

Common themes emerge from the case studies

6.125 The cases we examined cover a range of different mechanisms for

Exhibit 6.9

A Federal Sustainable Development Strategy for the North

Consultation on the first strategies

In February 1996, Indian and Northern Affairs Canada recognized that its sustainable development strategy needed "to be developed in a joint, cost-shared consultation approach in co-operation with other federal departments." During the first round of strategies, several departments (Indian and Northern Affairs Canada, Environment Canada, Fisheries and Oceans, Natural Resources Canada, Canadian Heritage and National Defence) co-ordinated their consultation efforts in the North. The report from the consultation concluded, "Each department is developing its own strategy, apparently with little or no co-ordination." There was strong support for an "integrated northern strategy that looked at all resources holistically."

Working toward an integrated federal strategy

In its first sustainable development strategy, Indian and Northern Affairs Canada established a target of developing a federal government sustainable development strategy for northern Canada. The first interdepartmental meeting was held on 18 February 1999 and was attended by representatives of eight departments or agencies. Departmental representatives prepared a sequence of questions highlighting the key decisions to be made about the scope and direction of the federal strategy. Through a series of meetings, participants maintained an ongoing record of their decisions by answering each question in turn. They also prepared a joint consultation document and an inventory of federal activity in the North. The cover of the consultation document had the names of 20 departments and agencies.

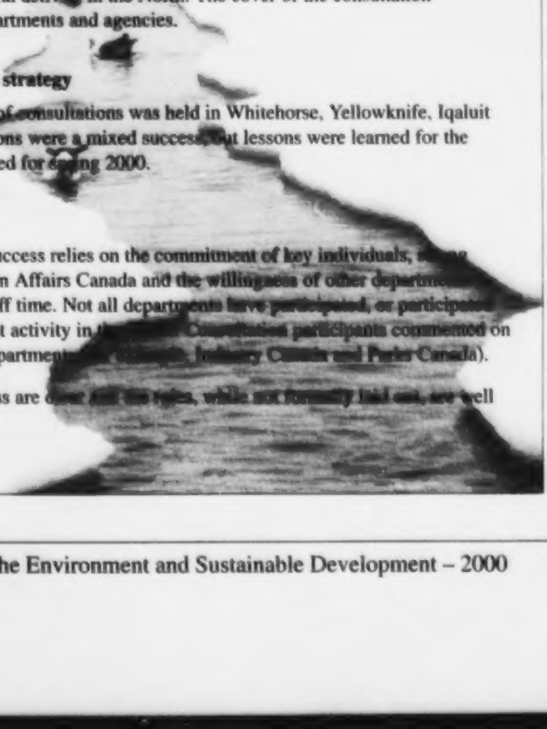
Early consultation for the second strategy

In November 1999, the first round of consultations was held in Whitehorse, Yellowknife, Iqaluit and Ottawa. Overall, the consultations were a mixed success but lessons were learned for the second round of consultation planned for spring 2000.

Key observations

As this is a voluntary process, its success relies on the commitment of key individuals, strong leadership from Indian and Northern Affairs Canada and the willingness of other departments to participate, financially and with staff time. Not all departments have participated, or participated strongly, even those with significant activity in the North. Consultation participants commented on the absence of some key federal departments (for example, Industry Canada and Parks Canada).

The overall objectives of the process are clear and the roles, while not formally laid out, are well understood informally.



Source: Office of the Auditor General

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departments to work with one another. The cases reflect different stages of policy development and implementation, extending from "green" procurement policy to implementation of the First Nation Forestry Program. Despite this variety, we were struck by the similarities and common themes.

As officials work outside of their departments, accountability cannot be assumed; it must be documented.

6.126 Who does what. We observed in all the case studies that clear objectives and mandates improved departments' ability to collaborate effectively. The absence of clear objectives and well-defined roles and responsibilities leads to problems. As officials move outside of the traditional and well-understood confines of their departments, they need to be much more explicit about the objectives and roles. Accountability cannot be assumed; it must be documented. Senior managers need to set appropriate goals and parameters for working with other departments.

6.127 Explicit objectives and roles, in turn, provide a solid foundation for good management. Without clear goals, it is not possible to manage toward them and report on progress. Without clear roles, it is not possible to hold individuals and organizations to account. We observed that all of these elements are essential to predictably achieving the intended results.

6.128 Neutral leadership. In most of the cases we examined, a neutral secretariat, an impartial chair, or the strong involvement of a central agency was crucial for maintaining trust among participants, effective leadership and good dispute resolution. The exception to this was the memorandum of understanding underlying the First Nation Forestry Program, which established a very

Exhibit 6.10

Some Key Interdepartmental Committees for Sustainable Development

Deputy Ministers

Sustainable Development Co-ordinating Committee – The federal government's senior forum on sustainable development, with a broad management and co-ordination mandate.

Assistant Deputy Ministers

Memorandum of Understanding on Science and Technology for Sustainable Development – This committee oversees the research co-ordinated among five departments (Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans, Health Canada, and Natural Resources Canada) on sustainable development issues.

Task Force on Sustainable Development – Originally created to provide input to the Speech from the Throne, the Task Force now acts as a "shadow" committee for the Sustainable Development Co-ordinating Committee.

Policy Research Initiative Steering Committee – This committee oversees the long-term research program on sustainable development under the Policy Research Initiative.

Working Level

Interdepartmental Network on Sustainable Development Strategies – The key vehicle for promoting interdepartmental co-ordination on horizontal sustainable development issues (see text).

Federal Committee on Environmental Management Systems – A forum for discussion and co-ordination of crosscutting issues related to environmental management systems.

Performance Measurement for Sustainable Government Operations – A mechanism for departments to work toward shared performance measures for their operations (see our May 1999 Report, Chapter 8).

Other groups have been created to address issues such as climate change, toxic substances, water conservation, contaminated sites, training, fleet management, environmental assessment and procurement.

Source: Environment Canada

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well-defined and complementary arrangement between two departments.

6.129 Clear benefits. Co-ordination demands time and resources. Departments (and other organizations) must anticipate sufficient benefits to outweigh the costs. They must also be willing to contribute sufficient resources to ensure that the co-ordination happens. A recurring challenge we noted was to create the incentives (money, recognition and information) for participating individuals and organizations to co-ordinate their efforts.

6.130 No one success factor is absolutely essential. A recent publication on horizontal management for the Canadian Centre for Management Development noted, "As is so often the case, co-ordination (or any other virtue) may be achievable without special mechanisms if there is the will to co-ordinate, but no mechanism is sufficient if there is an absence of will." Ultimately, it comes down to committed and effective individuals — and the incentives they have to work together.

What departments are doing to learn from their experience

6.131 Mechanisms to learn from experience, through program evaluations, regular monitoring, and good intradepartmental communication, permit departments to tailor their programs and initiatives to avoid the major pitfalls of previous initiatives. In each case study, there was previous experience (earlier programs, program evaluations, or a long history) to draw on. Sometimes this was done effectively, and sometimes not. Most of the learning we observed was ad hoc, depending on the individuals involved.

6.132 Federal departments are in a long-term relationship with one another. In all the cases we considered, the policy issues extended back many years. This continuity creates an opportunity for individuals to build trust across departments; they may work together on several related files. It also creates a challenge for knowledge management, providing a way for newcomers to learn the critical elements of the relevant files and managing turnover well.

6.133 In our view, there are four main steps that departments can take to learn from their successes and their failures. First, effective participation in external co-ordination efforts relies on good intradepartmental co-ordination to provide information, to ensure policy consistency and to obtain sufficient resources. Co-ordination within departments needs to happen at all management levels. Second, departments need to ensure that internal reports describe the situations in enough detail that others can learn from them. Third, departments need to plan for turnover. This has implications for intradepartmental briefing and for file management. Finally, departments need to share their experiences, good and bad, bilaterally with other departments.

Most of the learning we observed was ad hoc, depending on the individuals involved.

What central agencies are doing to help departments

6.134 Central agencies were not involved in some cases we observed; in others, they played constructive roles, offering perspective and experience. In one case (green procurement), they did not support good co-ordination. The federal government as a whole has not learned and communicated in any systematic way the key lessons from these attempts to co-ordinate.

6.135 Good interdepartmental co-ordination is limited by the fact that departments cannot compel other departments to act, but must use persuasion and negotiation. This means that arriving at a corporate "Government of Canada" perspective may require the involvement of central agencies. As one Clerk of the Privy Council stated, "Central agencies owe it to departments to support their efforts and act decisively in areas requiring corporate attention."

6.136 Who is responsible for ensuring that good co-ordination happens? The Privy Council Office has a key role in ensuring policy co-ordination and has provided guidance for selected aspects of departmental co-ordination. The Treasury Board Secretariat, through its control and oversight of many aspects of government operations, is uniquely placed to offer direction and advice on management issues.

6.137 In 1995, the Task Force on Managing Horizontal Policy Issues recommended that the Treasury Board Secretariat develop a "best practices" guide to interdepartmental co-ordination. In our recent review of new governance arrangements (Auditor General's November 1999 Report, Chapter 23), we recommended that the Treasury Board Secretariat identify and communicate the elements of a governing framework. We believe that many elements of such a framework are applicable to situations where departments are trying to work together. In our view, central agencies and departments can be much more explicit about the guidance needed and the lessons learned.

Central agencies and departments can be much more explicit about the guidance needed and the lessons learned.

6.138 As the Task Force on Managing Horizontal Policy Issues recommended, the Treasury Board Secretariat should prepare a "best practices" guide for interdepartmental co-ordination. Experienced officials in departments and central agencies should be consulted to ensure that the content is realistic and reflects the wisdom of those who have worked on horizontal files. Once the key ingredients are identified, the Treasury Board Secretariat and the Privy Council Office should prepare a strategy to ensure that horizontal initiatives are managed as efficiently and successfully as possible. This should involve ensuring that the principles and elements are well understood in departments and that the use of the framework is monitored.

Joint Privy Council Office and Treasury Board Secretariat response: *The Treasury Board Secretariat, as part of its ongoing role, is committed to strengthening results-based management and tracking lessons learned. The annual report on government performance,* Managing for Results, *reviews progress in this area as well as provides examples of performance reporting, across government, on the broad range of horizontal issues.*

The Privy Council Office is committed, as part of its ongoing advisory and facilitative role at all levels of policy development, communications and consultation, to assist departments in the practical and pragmatic application of the principles of horizontal management.

Conclusion

6.139 Departments have chosen a variety of approaches to working with other departments to deliver programs, develop new strategies, consult with stakeholders, achieve consensus on policy positions and exchange information. The approaches range from formal arrangements creating new entities to informal, voluntary networks for information exchange.

6.140 In most of the case studies we examined, departments had chosen an appropriate form for delivering the program or developing the policy. Key problem areas included unclear or missing objectives, poorly described roles, unclear accountability, and weak dispute resolution tied to lack of senior management involvement. Explicit descriptions of objectives and roles are essential as officials move to work with one another on the terrain between departments.

6.141 In most of the case studies, the intended results were achieved. The chief exception was green procurement. In some cases, the lack of monitoring and evaluation plans or information reduces Parliament's ability to determine whether the intended goals have been or will be attained. It also inhibits effective learning from past successes and failures.

6.142 We believe it is unrealistic to expect departments to track in detail each of their horizontal initiatives in order to learn the key lessons, especially when they are facing high turnover rates. This is evidently an area where central agencies can add value and support more effective management of issues that cut across departments; this includes sustainable development. There is much work to be done.

About the Audit

Objectives

The overall objective of this audit was to identify the key success factors for federal departments working with other departments to address sustainable development issues. The five sub-objectives were to:

- describe why and how federal departments are co-ordinating with other departments on environment and sustainable development;
- assess whether the co-ordination initiatives are taking a form appropriate to the objectives and intended results;
- assess whether the co-ordination initiatives are achieving the intended results;
- determine the reasons for the successes or failures of co-ordination initiatives; and
- determine whether the federal government has learned and communicated the key lessons from attempts to co-ordinate among departments.

Scope

The audit was built around six case studies. Five of the case studies were selected from commitments that departments had made in their first sustainable development strategies — commitments to work with other departments. These cases were selected in two phases. In the first phase, we selected cases in which co-ordination was necessary to achieve the objectives, significant environmental or economic aspects were involved, and the commitment was stated clearly enough to be auditable. In the second phase, we selected cases in which an audit could make a positive difference (there were lessons to be learned) and that our Office had not audited recently. We chose cases that represented a mix of different types of interdepartmental arrangements (for example, bilateral/multilateral, formal/informal, temporary/permanent) and that involved a mix of departments. A sixth case, the assessment of the effects of metal mining effluent, was added as a result of suggestions made in preliminary interviews.

Criteria

The audit criteria addressed three of the sub-objectives. The first and fourth sub-objectives are primarily descriptive, so audit criteria were not applicable.

For the second sub-objective, the primary criteria were clear objectives; participants with relevant knowledge, background and authority; clear roles, responsibilities and accountabilities; appropriate management structure; sufficient resource allocation; good dispute resolution; availability of information on progress; involvement of external stakeholders (if appropriate); and consistency with best practices.

For the third sub-objective, the primary criteria were whether the description of the objectives provided for evaluating success and whether the desired results were achieved.

For the fifth sub-objective, we looked at whether departments have learned the lessons from past experience and applied that knowledge and, where appropriate, central agencies have identified the lessons learned and helped apply them to other initiatives by other departments.

Approach

We reviewed relevant literature, analyzed the sustainable development strategies and subsequent progress reports, interviewed representatives of participating departments and external stakeholders (117 in total), reviewed departmental documents and observed meetings in progress. Our audit work focussed on 12 departments or agencies: Agriculture and Agri-Food Canada, Canadian Food Inspection Agency, Department of Foreign Affairs and International Trade, Indian and Northern Affairs Canada, Environment Canada, Fisheries and Oceans, Health Canada, Industry Canada, Natural Resources Canada, Privy Council Office, Public Works and Government Services Canada, and Treasury Board Secretariat.

In government-wide initiatives, such as the Interdepartmental Network on Sustainable Development Strategies, we paid particular attention to the co-ordination of networks and committees by the secretariats and chairs.

Given the limited sample size, the audit did not permit us to draw broad generalizations. For example, we did not arrive at a definitive list of factors promoting successful co-ordination. Our emphasis was on using the cases as illustrative and informative examples.

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Chapter 7

Co-operation Between Federal, Provincial and Territorial Governments

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Environment and Sustainable Development: Areas of Shared Jurisdiction 7–24

Co-operation Between Federal, Provincial and Territorial Governments

Main Points

7.1 The shared nature of environmental jurisdiction requires close co-operation between federal, provincial and territorial governments. Successful co-operation agreements depend on a mix of subjective and objective considerations. The case studies in this chapter demonstrate the importance of relationships where partners build and maintain trust between them. They show that leadership and commitment from all parties involved are essential as well as public and political support. Finally, they confirm that partners need the discipline to follow all the necessary steps during the life cycle of an agreement. The key to a successful co-operation agreement is meeting all or most of these conditions.

7.2 Before entering into an agreement, prospective partners need to be convinced that the issue is important and that a partnership is likely to be the best way of dealing with it. They need to recognize their respective jurisdictions and take into account the ability of their potential partners to deliver desired results. As well, they need to consult and involve all the organizations whose commitment is essential to achieving the agreement's objectives. If the partners do not meet these conditions, they could still reach an agreement but likely would not accomplish desired results.

7.3 In designing the agreement, accountability issues between the partners become important. Does the agreement specify clear, common or complementary objectives, time frames and expected results as well as clear roles and responsibilities? Are there appropriate provisions for co-ordinating, monitoring and reporting performance as well as evaluating and modifying the agreement, if necessary?

7.4 During the implementation of the agreement, partners have to keep their commitments. Each partner needs to produce an early action plan that defines clear roles and responsibilities within its own organization and that sets targets and time frames. Partners also need to integrate the agreement's objectives into their policies and operations. Finally, partners must co-ordinate activities, monitor results and submit timely and transparent progress reports.

7.5 Our case studies also provide examples of the "tight-loose" working relationship referred to in Chapter 5 of this Report. The relationship is one that is "tight" (or strict) on the results that partners have to achieve based on intergovernmental agreement and "loose" (or lenient) on the way they achieve them in the particular circumstances of each jurisdiction.

Background and other observations

7.6 The environment — and many other aspects of sustainable development — is a matter of shared jurisdiction between the federal and provincial governments. It is not specifically mentioned in the Constitution. Rather, both levels of government have constitutional powers over various matters that permit them to pass legislation to deal with environmental issues. In our previous reports, we recognized the complexity of managing within areas of shared jurisdiction.

7.7 This chapter presents five case studies involving federal, provincial and territorial governments working together on sustainable development issues: the Eastern Canada Acid Rain Program, the National Forest Strategy, the North American Waterfowl Management Plan, the Statement of Commitment to Complete Canada's Networks of Protected Areas, and the Greenhouse Gas Emission Reduction Trading Pilot.

Introduction

7.8 The environment — and many other aspects of sustainable development — is a matter of shared jurisdiction between the federal and provincial governments. It is not specifically mentioned in the Constitution. Rather, both levels of government have constitutional powers over various matters that permit them to pass legislation to deal with environmental issues (see the Appendix). For example:

- the provinces have jurisdiction over the management of provincial Crown lands, resources, property and civil rights as well as local works and undertakings;
- federal powers enact laws concerning fisheries, interprovincial and international trade and commerce, crime, peace, order and good government;
- agriculture is a federal and provincial responsibility;
- about 40 percent of Canada is federal Crown land (located mostly in the territories), and 50 percent is provincial Crown land. Resources generally belong to the owner of the land where they are situated.

7.9 The shared nature of environmental jurisdiction requires close co-operation between federal, provincial and territorial governments. In our previous reports, we recognized the complexity of managing within areas of shared jurisdiction (see Exhibit 7.1). We raised issues, such as the role of the federal government in a partnership and the accountability for overall results. We examined whether particular working relationships were achieving stated objectives.

Focus of the study

7.10 This study is part of a larger effort in this Report to identify key factors in the development and maintenance of successful partnerships for sustainable development. Chapter 5 introduces the main topic and gives an overview of the three following chapters. Chapter 6 reviews co-ordination between federal departments. Here in Chapter 7, we look at co-operation between federal, provincial and territorial governments. Chapter 8 examines co-operative approaches between the federal government and the private sector. Throughout our work, we have attempted to identify both common factors and factors that apply to a certain type of relationship.

7.11 This study focussed on co-operation agreements between federal, provincial and territorial governments for policy making and program delivery concerning the environment and sustainable development. Through five case studies, we learned how some agreements are achieving their objectives and why others are not. We paid particular attention to each agreement's life cycle: before parties entered into an agreement, the design of the agreement, and its implementation.

We paid particular attention to the life cycle of co-operation agreements.

7.12 We believe the lessons drawn from the case studies apply to most co-operation agreements between federal, provincial and territorial governments. However, the study cannot be generalized to determine the effectiveness of all these agreements. More details about the study are given at the end of this chapter.

Observations

Forums for Co-operation Between Federal, Provincial and Territorial Governments

7.13 Canada has a range of ministerial councils that serve as forums for co-operation between federal, provincial and territorial governments. The Canadian Council of Ministers of the Environment (CCME) is the main forum for intergovernmental discussion and

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co-operation on environmental issues of regional, national and global concern.

7.14 The Council comprises environment ministers from the federal government and 13 provincial and territorial governments. All its members are treated as equals and the chair rotates annually among them. The Council normally meets twice a year to discuss environmental priorities and to determine the work of intergovernmental task forces.

Exhibit 7.1

Federal-Provincial-Territorial Issues and the Environment: Our Observations in Previous Reports

1990 Report of the Auditor General of Canada,
Chapter 18, Department of the Environment

18.58 The consequence of these federal-provincial and interdepartmental divisions in responsibility for environmental matters is a patchwork that makes it almost impossible to assign public accountability for safeguarding Canada's environment. There is no focal point of responsibility or accountability to the Canadian people in respect of this critical issue.

18.59 Canada's governments are still seeking, through such efforts as the creation of the Canadian Council of Ministers of the Environment and the *Canadian Environmental Protection Act*, the means to act together to protect Canada's environment.

1998 Report of the Commissioner of the Environment and Sustainable Development,
Chapter 3, Responding to Climate Change — Time to Rethink Canada's Implementation Strategy

3.21 Clearly, in a federation such as Canada, issues that involve different levels of government working together create challenges. But these challenges are in no way unique to climate change. There are many areas in which federal and provincial governments have a shared interest in policy questions.

3.22 In 1995, a federal task force reported on its review of 16 case studies of federal-provincial co-operation in policy work. It found that success depended on a number of factors: building trust, which requires openness and careful attention to the interests of all parties; working within existing mechanisms of co-operation such as standing committees of officials; and developing a shared sense of the need to collaborate.

3.23 The current approach to federal, provincial and territorial co-operation in responding to climate change is not expected to produce the results that the federal government promised to Canadians over seven years ago. All levels of government need to plan and work together much more effectively to meet Canada's climate change commitments. The federal government has a key role to play in leading this national effort.

1999 Report of the Commissioner of the Environment and Sustainable Development,
Chapter 5, Streamlining Environmental Protection Through Federal-Provincial Agreements:
Are They Working?

5.1 Federal-provincial environmental agreements offer potential for increased protection of the environment and the streamlining of the administration and regulatory activities between the two levels of government. The agreements that we audited are not always working as intended. We found that many activities that are essential to implementing these agreements are not working as well as they could.

5.2 Environment Canada was unable to provide us with documents to indicate that before entering into these agreements the federal government had formally analyzed the associated risks to determine, for example, whether both parties could do what they were agreeing to do. Therefore, we have no evidence that such an analysis was done. Furthermore, the federal government does not have a documented plan in place that indicates how it would reassume its responsibilities should a province be unable to carry out its assigned responsibilities, or should it or a province decide to terminate an agreement.

co-operation on environmental issues of regional, national and global concern.

7.14 The Council comprises environment ministers from the federal government and 13 provincial and territorial governments. All its members are treated as equals and the chair rotates annually among them. The Council normally meets twice a year to discuss environmental priorities and to determine the work of intergovernmental task forces.

Exhibit 7.1

Federal-Provincial-Territorial Issues and the Environment: Our Observations in Previous Reports

1990 Report of the Auditor General of Canada
Chapter 18, *Department of the Environment*

[illegible]

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1998 Report of the Commissioner of the Environment and Sustainable Development
Chapter 3, *Responding to Climate Change — Time to Rethink Canada's Implementation Strategy*

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[illegible]

[illegible]

1999 Report of the Commissioner of the Environment and Sustainable Development
Chapter 2, *Strengthening Environmental Protection Through Federal-Provincial Agreements: Are They Working?*

[illegible]

[illegible]

7.15 Other ministerial councils have been established to consider issues involving wildlife, parks, forests, agriculture, energy and fisheries. These councils operate independently and usually enjoy the support of a secretariat, sub-committees or working groups.

7.16 Joint council meetings are one way to promote intergovernmental co-operation on issues that cut across mandates and jurisdictions. For example, federal, provincial and territorial energy and environment ministers meet to discuss air issues, such as climate change, acid rain and smog.

7.17 Exhibit 7.2 presents the intergovernmental councils involved in the issues that we examined in this study.

Conditions for Successful Co-operation Agreements

7.18 Our interviews indicated a strong interest among federal and provincial officials in practices and attitudes that lead to successful co-operation agreements. Most officials felt that intergovernmental co-operation on the issue that concerned them was the best way for their departments to achieve their objectives. Participants from industry and environmental organizations shared this view.

7.19 We also noted a consensus among practitioners of co-operation agreements that effective co-operation involves a mix of subjective and objective factors that are largely independent of the type of relationship — whether it is within government, between governments or with a non-governmental organization. Openness, transparency as well as a willingness to listen and to make changes are some of the subjective factors that are required to build and maintain trust between partners. Leadership, commitment from staff and senior management as well as public and political support also figure prominently in the list of key factors identified by practitioners in Chapter 5 of this Report (see Exhibit 5.2).

7.20 In our previous reports, we paid special attention to objective factors, such as accountability in collaborative arrangements. While our interviews of practitioners and the review of case studies confirmed the importance of accountability, they also showed that prospective partners need to meet certain key conditions long before they design an agreement:

- **Before entering into an agreement**, prospective partners need to be convinced that the issue is important and that a partnership is likely to be the best way of dealing with it and to offer clear benefits to the participating organizations. They need to recognize their respective jurisdictions and take into account the ability of their potential partners to deliver desired results. As well, they need to consult and involve all the organizations whose commitment is essential to achieving the agreement's objective. If the partners do not meet these conditions, they could still reach an agreement but likely would not accomplish desired results.

- **In designing the agreement**, accountability issues between the partners become important. Does the agreement specify clear, common or complementary objectives, time frames and expected results as well as clear roles and responsibilities? Are there appropriate provisions for co-ordinating, monitoring and reporting performance as well as evaluating and modifying the agreement, if necessary? Have partners set the stage for a flexible approach to implementation that will take into account differences among jurisdictions?

- **During the implementation of the agreement**, partners have to keep their commitments. Each partner needs to produce an early action plan that defines clear roles and responsibilities within its own organization and that sets targets and

There was a strong interest among federal and provincial officials in practices and attitudes that lead to successful co-operation agreements.

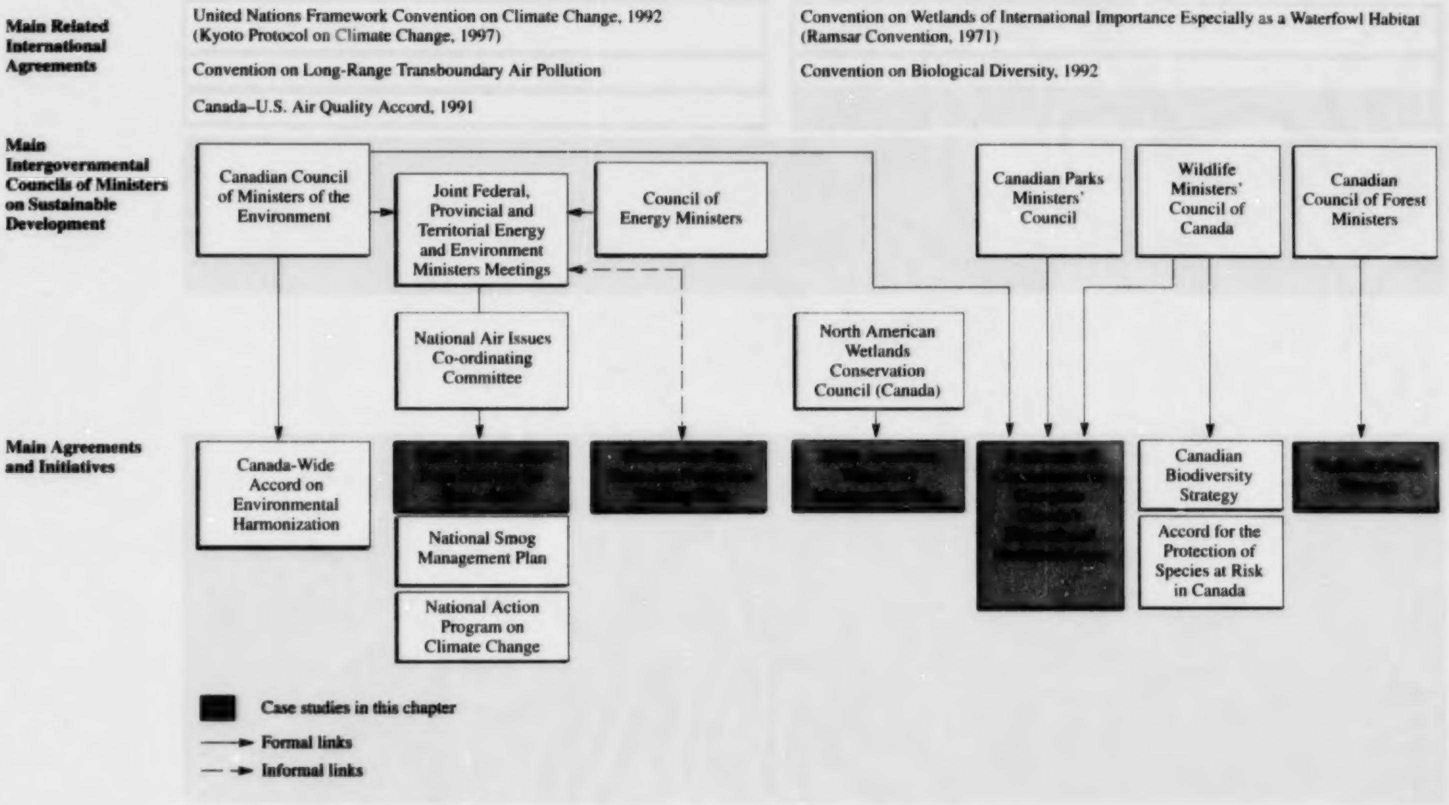
Prospective partners need to meet certain key conditions long before they design a co-operation agreement.

"Why have an agreement? Only when there are more advantages to having it than to living without it."

Federal and provincial officials

Exhibit 7.2

Intergovernmental Co-operation: Linkages to Our Case Studies


Main Related International Agreements
United Nations Framework Convention on Climate Change, 1992 (Kyoto Protocol on Climate Change, 1997)
Convention on Long-Range Transboundary Air Pollution
Canada–U.S. Air Quality Accord, 1991
Convention on Wetlands of International Importance Especially as a Waterfowl Habitat (Ramsar Convention, 1971)
Convention on Biological Diversity, 1992
Main Intergovernmental Councils of Ministers on Sustainable Development
Canadian Council of Ministers of the Environment
Joint Federal, Provincial and Territorial Energy and Environment Ministers Meetings
Council of Energy Ministers
National Air Issues Co-ordinating Committee
North American Wetlands Conservation Council (Canada)
Canadian Parks Ministers' Council
Wildlife Ministers' Council of Canada
Canadian Council of Forest Ministers
Main Agreements and Initiatives
Canada-Wide Accord on Environmental Harmonization
National Smog Management Plan
National Action Program on Climate Change
Canadian Biodiversity Strategy
Accord for the Protection of Species at Risk in Canada
Case studies in this chapter
Formal links
Informal links

[1] Replaced the Eastern Canada Acid Rain Program.

Note: This chart is selective by design and is not exhaustive. We wanted to show the main structures of intergovernmental co-operation involved in the issues that we examined in our case studies.

time frames. Partners also need to integrate the agreement's objectives into their policies and operations. Finally, partners must co-ordinate activities, monitor results and submit timely and transparent progress reports.

7.21 In the following case studies, we examine how the presence (or absence) of these elements affects an agreement's success.

Eastern Canada Acid Rain Program

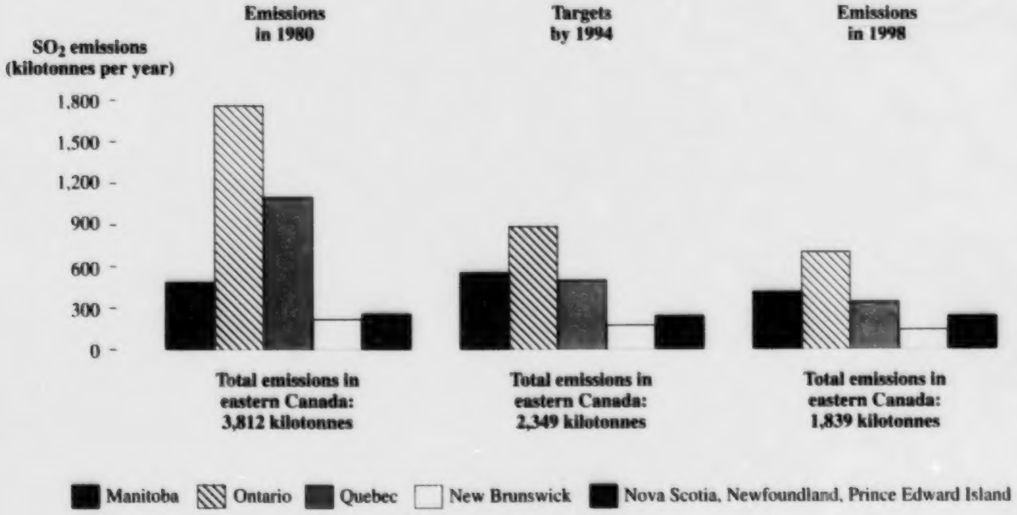
7.22 In February 1985 after years of discussing acid rain, the environment ministers of Canada's seven eastern provinces announced their agreement on national and provincial reduction targets of sulphur dioxide (SO_2) emissions. These emissions are the primary cause of acid rain. The ministers agreed to limit emissions to 2,300 kilotonnes by 1994 — emissions had reached 3,812 kilotonnes in 1980. By 1994, the seven provinces had reduced their SO_2 emissions to 1,752 kilotonnes, which was well below their 1994 target and 54 percent lower than the level of emissions in 1980 (see Exhibit 7.3). How did they do it?

7.23 **Agreeing on the issue.** Acid rain has often been referred to as the "invisible issue" because evidence of acid rain damage is not easy to detect. The first challenge was to agree on the problem of acid rain. The federal and provincial governments developed the science base to better understand acid rain and to estimate the environmental consequences of reductions in SO_2 emissions. Their models showed that meeting the 1994 target, coupled with parallel action in the United States, would limit wet deposits of sulphate to no more than 20 kilograms per hectare per year in the eastern provinces. This was viewed as the acceptable level for protection of moderately sensitive aquatic systems.

> **"You need public buy-in. The level of buy-in depends on how much you included the public in your discussions and how well you clarified issues."**
>
> **A provincial official**

Exhibit 7.3

Targets for Eastern Canada and Provinces to Reduce Sulphur Dioxide (SO_2) Emissions



Sources: Environment Canada, 1997 Annual Report on the Federal-Provincial Agreements for the Eastern Canada Acid Rain Program; 1999 Annual Progress Report on the Canada-Wide Acid Rain Strategy for Post-2000

The governments and environmental organizations made a concerted effort to raise the public's awareness of the impact of acid rain and to sustain its interest by reporting progress annually.

7.24 **Agreeing on the need for a formal agreement.** Once they had agreed on the importance of the problem of acid rain, the federal and provincial governments recognized the need for an agreement between them rather than independent action by the provinces. Provincial officials felt that a Canadian agreement would give ammunition to the federal government in its negotiations with the United States on reductions in transboundary flows of SO_2. Transboundary SO_2 pollution was — and remains — a major problem for Canada, especially in Ontario, Quebec, New Brunswick and Nova Scotia.

7.25 Equally important, the Program had the means to realize its objectives. For example, substantial financial resources made it possible to build a good science base and to support industry's efforts to reduce SO_2 emissions.

Acid rain: the invisible issue. Science has shown that over time acidification reduces the variety of life inhabiting lakes and slows down the growth process of forests. However, these long-term trends are hardly noticeable to the human eye. (See paragraph 7.23.)

Source: Photo courtesy of Images of New Brunswick

The success of the Eastern Canada Acid Rain Program is due in large part to the massive investments in upgrading large power plants that burn fossil fuels as well as smelters of primary metals. For example, at the end of the 1980s, Noranda's Horne operations in Quebec (shown on the right) performed work valued at more than $150 million to reduce SO_2 emissions. (See paragraph 7.25.)

Source: Photo courtesy of Noranda Inc.

7.26 Clear and agreed targets. The federal and provincial governments agreed on a target and time frame to reduce SO_2 emissions in eastern Canada. They also set targets and time lines for each of the seven provinces from Manitoba eastward. These targets and time frames were included in the seven bilateral agreements signed in 1987–88.

7.27 A flexible approach to implementation. Although the Eastern Canada Acid Rain Program was very specific on the expected results, it let the provinces decide how they intended to achieve them. For example, the Quebec and New Brunswick governments met their respective targets with quite different approaches. Quebec regulated SO_2 emissions. New Brunswick negotiated with each smelter and power plant using fossil fuels and integrated the reduction targets of SO_2 emissions into the companies' annual permits for "approval to operate."

Canada-Wide Acid Rain Strategy for Post-2000

7.28 In 1998, federal, provincial, and territorial energy and environment ministers signed the Canada-Wide Acid Rain Strategy for Post-2000. The Strategy builds on the 1997 report of the Acidifying Emissions Task Group, a multi-stakeholder group. It is based on scientific evidence that acid rain will continue to damage sensitive areas, despite progress.

7.29 The Strategy establishes the way Canada will manage acid rain in the future. It recognizes that Canada has to seek further reductions in SO_2 emissions in the United States; that Ontario, Quebec, New Brunswick and Nova Scotia have to set new reduction targets; and that there is an ongoing need to research and monitor acid rain, prevent pollution, keep clean areas clean and report results annually.

7.30 Struggling to keep the issue alive. However, unlike the 1985 Program, the main challenge of the Post-2000 Strategy has been to keep the issue alive. In the words of one environmentalist, "Acid rain fell off the political radar screen." With decreasing public and political support, provincial governments could not agree on reduction targets for the Strategy. Rather, Ontario, Quebec, New Brunswick and Nova Scotia committed to report progress to energy and environment ministers by the end of 1999. (It was understood in the spirit of the agreement that these provinces would also submit targets.) By that date, only Quebec had set a target to reduce its SO_2 emissions to 40 percent below current limits by 2002. In the Strategy's November 1999 Progress Report, the three other provinces committed to announcing further emission reductions by the end of 2000. Ontario did so in January 2000, setting a reduction target of 50 percent by 2015.

"In the late 1980s, it was very clear that reducing sulphur dioxide emissions was a priority for the government. You could not sit with department officials without having them discuss this priority."

An industry representative

National Forest Strategy

7.31 Broadening the stakeholder base. In 1987, the Canadian Council of Forest Ministers introduced the first national forest strategy. In 1992, the second strategy broadened its base of participants to 12 governments and 17 organizations, most of which had long-standing links to the forest industry. The third and current National Forest Strategy of 1998 built on the previous strategies and recognized the need for a wider base of participation. A total of 42 participants from governments, forest industry associations and environmental organizations signed on to the Canada Forest Accord and its accompanying Strategy. These 42 partners formed what has been called the "Coalition." Broadening the base provided participants with a chance to better understand each other's interests and ensured wider support for the initiative. The Quebec government did not sign the Accord, but it did endorse the Accord's goal and objectives.

"You can never be totally inclusive but the 'Coalition' has made a real effort to expand the types of members. This has benefited the discussion on sustainable forestry practices and provided a real opportunity for people to talk."

A provincial official

"I hope the National Forest Strategy will work. It's a very important initiative for our members and for Canada. We really believe that without sustainable practices, we don't have a future in forestry."

An industry representative

7.32 The goal of the Accord and the Strategy is to "maintain and enhance the long-term health of our forest ecosystems, for the benefit of all living things both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations."

7.33 Expected benefits for participants. There has been a high level of consensus among participants on the main goal of the Strategy, yet different reasons motivated their participation in a national strategy. For example, each province has full jurisdiction over management of its forests and could act on its own. However, provincial officials recognized the need for a strong, unified response to international market pressures to better integrate environmental, social and economic values into forest management. They saw the National Forest Strategy as a means to that end.

7.34 For their part, Native representatives wanted to increase Aboriginal participation in forest management. They felt that being involved in the Strategy might enable them to put in place broad principles that would help them pursue their goals. Key to their participation was the fact that the Strategy addressed sustainable development and reflected the full range of forest values and that governments were open to Aboriginal participation.

Sustainable forestry practices include a wide range of activities, including reforestation. As stated in the National Forest Strategy's first strategic direction, different partners with sometimes divergent values have to work together in order to maintain the integrity, productivity, resilience and biodiversity of forest ecosystems. (See paragraph 7.32.)

Source: Photo courtesy of Industrial, Wood & Allied Workers of Canada (I. W. A. Canada)

7.35 The ongoing challenge of developing specific, measurable objectives. The National Forest Strategy is a comprehensive document that presents a vision of sustainable forests nationwide. The Strategy presents 121 action items grouped under nine strategic directions. Yet it does not contain specific targets, performance indicators or time lines for achieving its objectives. Nor does it present priorities or specify the roles and responsibilities of the various organizations that signed the Canada Forest Accord.

7.36 Aware of these deficiencies, the Accord signatories agreed to prepare, before the end of 1998, public and measurable action plans in response to the Strategy commitments. No signatories met the deadline. By January 2000, however, 17 of the 42 organizations (including the federal government and eight out of nine provinces) had submitted their action plan. The Quebec government also had prepared an action plan. These plans are essential for translating the Strategy's general commitments into concrete action; without them, the Strategy is in danger of loosing momentum.

7.37 Lack of early monitoring. Many of the people we talked to suggested that the absence of a clear champion for the first year and a half of the 1998 Strategy contributed to its slow start. As stated in the Accord, the Canadian Council of Forest Ministers acts as "the public trustee of the strategy . . . and will ensure that progress is reviewed at its annual meetings." The Coalition also meets once a year to "oversee the strategy implementation from planning to evaluation." Furthermore, there is an Evaluation Committee. However, most of the daily monitoring is left to the Coalition's secretariat, composed of staff from Natural Resources Canada. There was no systematic follow-up of missing action plans before the end of 1999, other than correspondence relating to the Coalition's annual meeting. One Coalition partner commented, "Who is doing the follow-up on the Accord? I wouldn't have minded if somebody had 'nudged us', then we would probably have done the action plan."

7.38 Mid-term evaluation and reporting. Based on the action plans it has received so far and as instructed by the Evaluation Committee, the secretariat is analyzing gaps in the Strategy's objectives and the contribution of each signatory. The Coalition plans to release a highlights report in the spring of 2000 to provide a national overview on progress and key achievements. An independent panel of experts will conduct a formal mid-term evaluation. The Coalition will make its results public by the winter of 2001.

North American Waterfowl Management Plan

7.39 By 1985, the number of North American waterfowl (ducks, geese and swans) had fallen to a low of 55 million — a significant drop from the 100 million in the 1970s. In 1986, Canada and the United States signed the North American Waterfowl Management Plan, a 15-year agreement, to address the problem. The Plan aimed to restore waterfowl populations in North America to 1970s levels by securing, enhancing, and managing their habitat across the continent. In 1994, the Plan was updated to expand the commitment of Canada and the United States and to include Mexico, making it the largest habitat conservation effort in the world.

7.40 Canada has been implementing the Plan through partnerships called "joint ventures," of which three focus on habitat: the Prairie Habitat Joint Venture, by far the largest; the Pacific Coast Joint Venture; and the Eastern Habitat Joint Venture. Three other joint ventures concern species — black ducks, arctic geese and sea ducks — rather than habitats.

7.41 Reasons for a North American agreement. Waterfowl migrate annually across North America. Although waterfowl breed mainly in Canada, most hunters and bird watchers are in the United States. Plan funding reflects these facts. In March 1999, Environment Canada estimated that slightly more than half of the $480 million contributed by the Plan in Canada since its inception in 1986 had come from sources in the United States. As these contributions were linked to the level of Canadian contributions, there was an additional incentive for ongoing involvement of Canadian federal and provincial governments and other Canadian partners.

"You need a champion for the National Forest Strategy."

A provincial official

7.42 Agreeing on complementary objectives. The Plan brought together people with different but complementary objectives. Hunters had an interest in maintaining waterfowl populations for sport and food; other groups wanted to protect wildlife species. Both sides realized, however, that conserving habitats, which provide breeding, staging and wintering grounds for waterfowl, was an essential part of the solution.

"You need shared objectives or compatible objectives."

A federal official

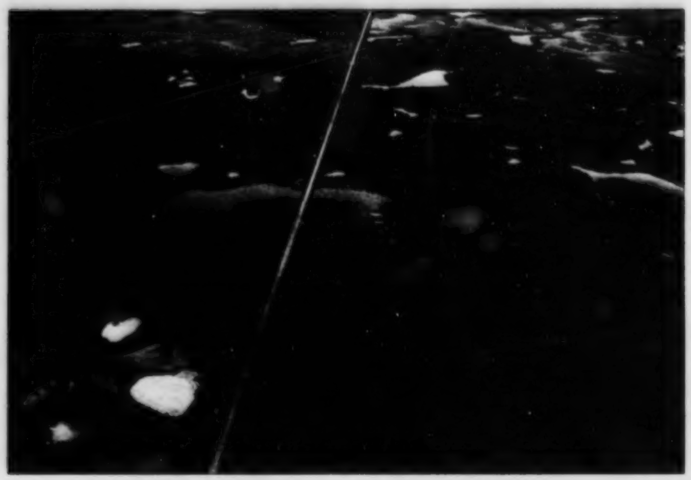
7.43 Government and environmental organizations also recognized that although they had a very ambitious goal to conserve wetland and upland habitats, they could not do it on their own. For example, the agricultural community in the Prairies, an important partner in the Plan, took part in some Plan initiatives such as flatland dams and rotational grazing that proved to be beneficial to both farmers and wildlife.

"The North American Waterfowl Management Plan is a transparent partnership, open and honest, so participants trust each other."

Federal and provincial officials

7.44 Clear and measurable targets. When the Plan was launched in 1986, partners set targets for North America, Canada and the joint ventures to restore waterfowl populations and to secure, enhance and manage key habitats. The information available on waterfowl populations helped partners to agree on these targets. Monitoring during decades before 1986 had made it possible to determine that the average duck population levels in the 1970s generally met the needs of all users. Consequently, that decade was used as a benchmark for all the population targets of the Plan.

7.45 An appropriate management structure. Developing a management structure for the Plan was a challenge. The structure had to adequately represent the different levels of government and allow meaningful stakeholder participation. It also had to include a rigorous yet simple approval process for programs and projects, accommodate different implementation approaches of the joint ventures and provinces, and provide for timely and transparent reporting of progress and updating of the Plan.



The "Prairie Potholes" provides breeding habitat for half of North America's waterfowl. Most of the area is privately owned and dedicated to farming. One of the programs funded through the North American Waterfowl Management Plan is the Potholes Plus Program, also known as the Adopt-a-Pothole Program. This initiative offers incentives to landowners who conserve wetland and upland habitats for the long-term. (See paragraph 7.43.)

Sources:
Manitoba Habitat Heritage Corporation, Annual Report 1998–99
North American Waterfowl Management Plan, *Taking Flight* 1986 to 1996: 10th Anniversary Report – Canada, 1996

Photo courtesy of Ducks Unlimited Canada

In the 1970s, average mallard populations were estimated at 8.2 million in the Canadian and American Prairie Region (Mid-Continent Region). By 1985, their numbers had plummeted to less than five million. In 1998, 12 years into the North American Waterfowl Management Plan, numbers had soared back to 9.6 million. (See paragraph 7.44.)

Sources:
North American Waterfowl Management Plan, *Expanding the Vision*, 1998 Update
North American Waterfowl Management Plan, *Taking Flight*, 1986 to 1996: 10th Anniversary Report – Canada, 1996

Photo courtesy of Ducks Unlimited Canada

7.46 Exhibit 7.4 presents the Plan's management structure. Although the structure comprises many layers, it relays information effectively to all partners and ensures their continued commitment. In the Prairie Habitat Joint Venture, for example, despite the large number of government agencies and environmental organizations involved in the Plan, each party's role and responsibilities are clear.

7.47 **Continuity of relationships.** Many key government officials have been involved in the Plan from the beginning and have enjoyed good, long-standing relationships with their partners. Many participants consider that this factor helped to sustain commitment to meeting the Plan's objectives.

7.48 **Transparent progress reporting.** The Plan has been able to maintain private and government financial support as well as commitment from staff and leaders for the past 14 years, in part because progress reporting has been transparent and comprehensive (see Exhibit 7.5). The North American Plan Committee and the Joint Venture Management Boards draft plan updates, the North American Wetlands Conservation Council (Canada) receives annual accomplishment reports, and the provincial corporations involved in the joint ventures prepare annual reports.

7.49 The Plan updates are produced every four years for Plan partners and the general public. They clearly link the objectives to achieved results and use findings from evaluation studies. They also acknowledge where plans have fallen short. For example, pintail populations are not recovering as hoped, and total secured habitats are well below the initial targets.

A Statement of Commitment to Complete Canada's Networks of Protected Areas

7.50 **Bringing together a range of interests.** In 1992, the chairs of three federal-provincial councils signed a Statement of Commitment to "make every effort to complete Canada's networks of protected areas representative of Canada's land-based natural regions by the year 2000 ... and to adopt frameworks, strategies and time frames" to meet this goal. The three councils were the Canadian Council of Ministers of the Environment, the Canadian Parks Ministers' Council and the Wildlife Ministers' Council of Canada. The Canadian Council of Forest Ministers was not asked to sign the agreement but supported it publicly. The breadth of commitment — from ministers across Canada responsible for many aspects of protected areas — was as unusual at the time as it is today.

7.51 The Statement allowed governments to set their own agendas and timetables for protected areas. In 1989, World Wildlife Fund Canada, a major environmental organization, had launched its Endangered Spaces Campaign. It proposed that Canada declare at least 12 percent of its land as protected area, representing all of its land-based national regions, and free from logging, mining, oil and gas and hydro-electric development. It subsequently started to report annually on how the federal government and the provinces were meeting this target.

7.52 In signing the Statement, the three councils did not commit to the 12 percent target. They believed that adequate representation of the different natural regions was more important than the total area protected. Each jurisdiction was left to define the actions required to achieve the Statement's goal.

7.53 **Developing commitment.** The federal government initiated the Statement. The federal Minister of the Environment (also responsible for wildlife and parks) asked the Minister of State (Environment) to meet provincial and territorial environment, parks and wildlife ministers to secure their support for the Statement. This mission was made easier because

"Continuity of the main players is a key success factor."

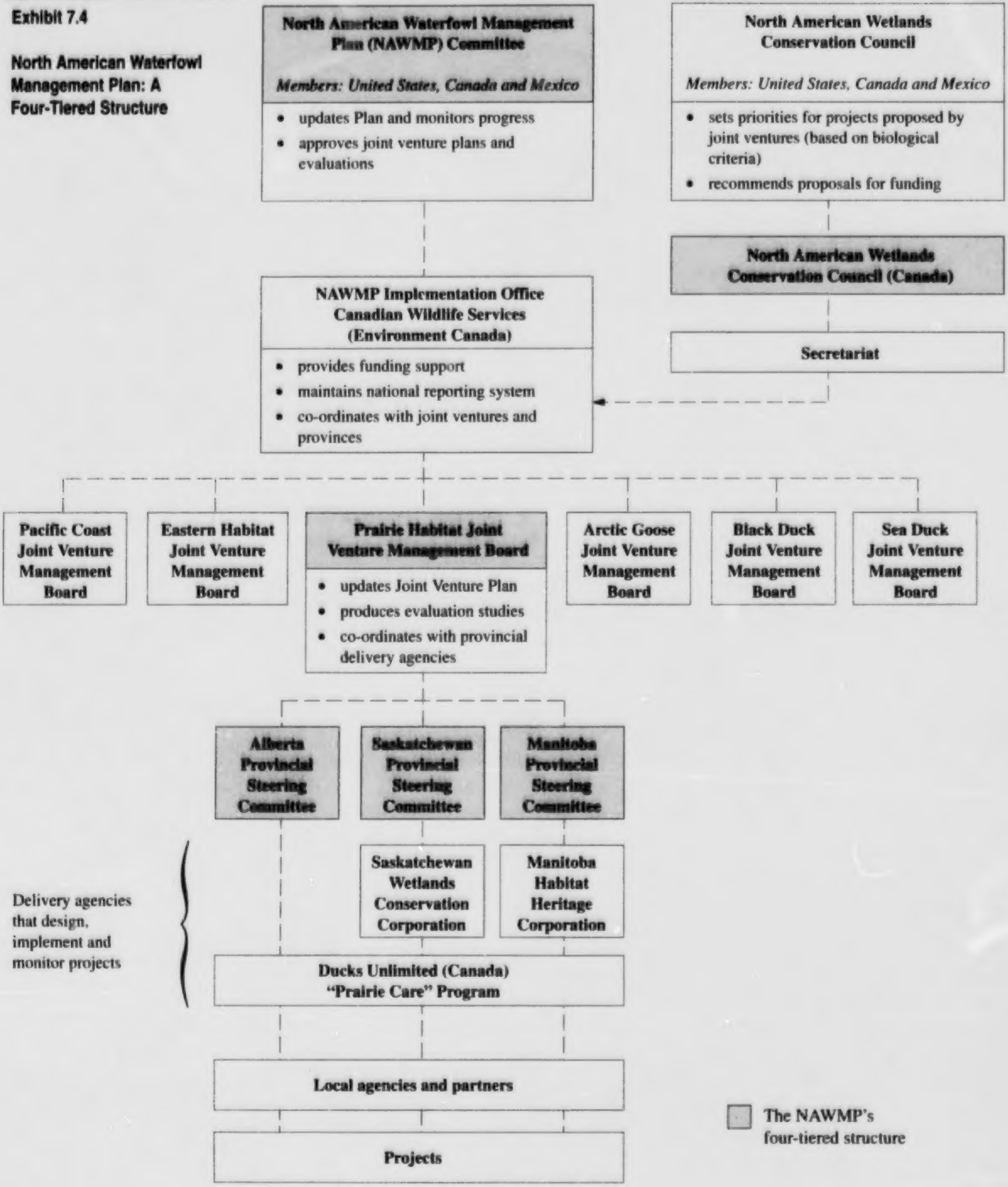
A federal official

"One strength of the Statement is that it was a tri-council commitment. It reflected the fact that expanding the networks of protected areas would require contributions from more than one agency. It recognized that many programs are complementary."

A representative from an environmental organization

Exhibit 7.4

North American Waterfowl Management Plan: A Four-Tiered Structure


North American Waterfowl Management Plan (NAWMP) Committee
Members: United States, Canada and Mexico
• updates Plan and monitors progress
• approves joint venture plans and evaluations
North American Wetlands Conservation Council
Members: United States, Canada and Mexico
• sets priorities for projects proposed by joint ventures (based on biological criteria)
• recommends proposals for funding
North American Wetlands Conservation Council (Canada)
Secretariat
NAWMP Implementation Office Canadian Wildlife Services (Environment Canada)
• provides funding support
• maintains national reporting system
• co-ordinates with joint ventures and provinces
Pacific Coast Joint Venture Management Board
Eastern Habitat Joint Venture Management Board
Prairie Habitat Joint Venture Management Board
• updates Joint Venture Plan
• produces evaluation studies
• co-ordinates with provincial delivery agencies
Arctic Goose Joint Venture Management Board
Black Duck Joint Venture Management Board
Sea Duck Joint Venture Management Board
Alberta Provincial Steering Committee
Saskatchewan Provincial Steering Committee
Manitoba Provincial Steering Committee
Saskatchewan Wetlands Conservation Corporation
Manitoba Habitat Heritage Corporation
Delivery agencies that design, implement and monitor projects
Ducks Unlimited (Canada) "Prairie Care" Program
Local agencies and partners
Projects
▢ The NAWMP's four-tiered structure

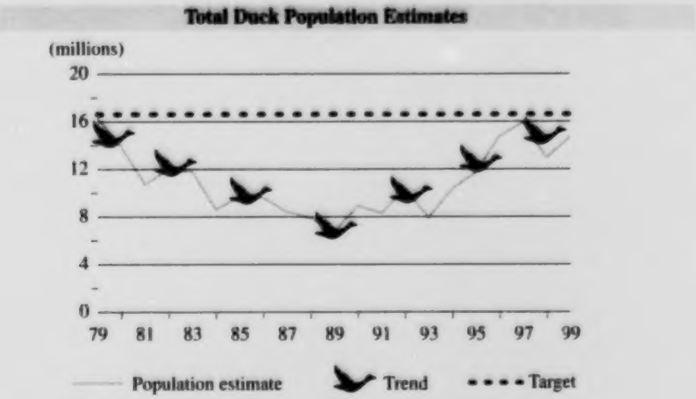
Source: North American Waterfowl Management Plan, *Expanding The Vision*, 1998 Update some provinces had already embarked on ambitious initiatives for protected areas with the support of their highest officials.

7.54 Limited monitoring of implementation. The Statement did not specify a procedure for monitoring or reporting progress toward meeting its goal. Nor did it give one of the three councils the responsibility to co-ordinate monitoring and reporting activities. Starting in 1996, parks ministers directed that progress on the Statement of Commitment be a permanent item on the agenda of their council meetings. The two other councils (environment and wildlife) did not do any regular follow-up of the Statement's progress.

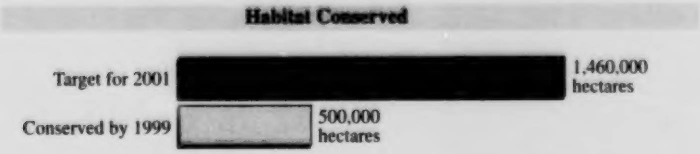
7.55 Lack of clear accountability within the federal government. While Environment Canada took the lead in initiating the Statement of Commitment, it is now unclear who has responsibility for co-ordinating the federal effort. In 1994, Parks Canada, the organization that would make the most direct contribution to the federal effort, moved from Environment Canada to the Department of Canadian Heritage. When we recently talked with Parks Canada officials, they did not think they were responsible for co-ordinating the federal effort, although they had

Exhibit 7.5

Prairie Habitat Joint Venture: Reporting Against Targets



Note: The target is a spring waterfowl breeding population of between 17 million and 20 million birds.



Note: Only 34 percent of the target for habitat conserved had been met by 1999. However, this was achieved with only 30 percent of the budget initially planned.

Sources:

Prairie Habitat Joint Venture, *Conserving an International Resource*, 1986–1994

North American Waterfowl Management Plan, *Taking Flight*. 1986 to 1996: 10th Anniversary Report – Canada

NAWCC (Canada) Meeting, *Canadian NAWMP Accomplishment Report*, 1986–87 to 1998–99, 29 September 1999

Canadian Wildlife Service, *Estimated Spring Populations of Total Ducks: Southern Prairie*, (Strata 26–40), 1979–99

> **"All the provinces that expanded their networks of protected areas had action plans produced early on. Their plans identified structures involved in implementation and resources needed, and indicated to other partners where they could take complementary action."**
>
> **A representative from an environmental organization**

assumed the role of federal-provincial co-ordinator for the Canadian Parks Ministers' Council.

7.56 Making it happen. The provinces that progressed in expanding their networks of protected areas took key implementation steps. British Columbia and Manitoba, for example, consulted stakeholders early, developed action plans specifying roles and responsibilities as well as targets and time frames, updated their plans regularly and reported their progress. To integrate the Statement's objectives into its departments' planning and operations, British Columbia identified protected areas through its regional land-use planning.

7.57 Among the three federal-provincial councils, only the Canadian Parks Ministers' Council has been reporting annually to its members on the progress of federal and provincial park agencies in completing Canada's networks of protected areas. Furthermore, it will submit an "end of commitment" progress report in the summer of 2000. However, the three councils have not publicly reported the progress made by all environment, park and wildlife government agencies, nor do they plan to do so before the Statement expires in 2000.

The Kitlope Heritage Conservancy Park is located on the central coast of British Columbia (B.C.). Old-growth trees over 800 years old stand in this unique temperate rain forest. The establishment of this protected area was announced in 1994 after a timber company relinquished all rights to harvesting in the area without consideration or compensation from the B.C. government. The Kitlope Valley lies within the traditional territory of a First Nation that has been co-operating with BC Parks in the management of this protected area. (See paragraph 7.56.)

Sources: British Columbia Ministry of Environment, Lands and Parks

Photo courtesy of the Government of British Columbia

7.58 Reporting by a third party. For now, interested parties are monitoring Canada's progress based on information contained in World Wildlife Fund Canada's progress reports on its Endangered Spaces Campaign. In its summary of the 1998–99 Progress Report, the Fund concluded, "Some exciting things have been accomplished, but, as the end of the campaign draws near, decisive government leadership will be critical to seeing significant progress made on those commitments. We no longer have the luxury of years in which to make progress; we are down to months."

Greenhouse Gas Emission Reduction Trading Pilot

7.59 The Pilot, formally launched in 1998, brought together federal and provincial officials as well as industry and environmental representatives who were interested in learning more about the trading of reductions in emissions of greenhouse gases. These emissions — mainly carbon dioxide, methane and nitrous oxide — can lead to climate change. Emission-reduction trading represents one tool that Canada could use to meet its commitment under the 1997 Kyoto Protocol, which is to reduce its greenhouse gas emissions to six percent below 1990 levels by 2008–2012.

7.60 Emission-reduction trading would allow companies that achieve substantial emission reductions to sell them to other companies that may find it more expensive to reduce their own emissions. While Canada is still developing a strategy for meeting its

Kyoto commitment, participating companies hope that emission-reduction trading will be part of the strategy and that they will receive a credit for their voluntary early actions.

7.61 Federal and provincial officials initially met industry and environmental representatives to learn more about emission-reduction trading. A 1998 Memorandum of Understanding (MOU), drafted by all participants but signed only by governments, formalized these discussions and contained rules for the operation and evaluation of the Pilot.

7.62 **Changing expectations.** While federal and provincial officials continued to view the Pilot as a learning experience, their partners' expectations had grown since the initial meetings. Industry representatives pressed for formal recognition that companies would receive "credits for early action" if Canada ever chose to regulate greenhouse gas emissions. However, the governments that signed the MOU were unable to make that commitment because the issue was being discussed in other intergovernmental forums. Environmental organizations hoped that the projects submitted for evaluation under the Pilot would provide real environmental gains. Yet they realized that the lack of real incentives for industry made that outcome very unlikely. Nevertheless, most participants recognize that the MOU's main objective — learning — is being achieved.

7.63 **Building and maintaining a productive working relationship.** Participants in the Pilot had to deal with highly technical issues, such as evaluating what a company would have done in the absence of a trading pilot. The productive relationship they enjoyed helped them to reach consensus. Clauses on the decision-making process in the initiative's operating rules also facilitated discussions.

7.64 **A provincial lead.** The Pilot is an example of an intergovernmental agreement where the federal government is a participant rather than the lead. In 1996, the British Columbia government began to study emission-reduction trading as part of its Greenhouse Gas Action Plan. It has been the recognized leader of the Pilot since its inception. The other government participants are Alberta, Saskatchewan, Manitoba, Quebec, Nova Scotia and the federal government. Ontario, for its part, is involved in a different pilot dealing with emission reductions of carbon dioxide.

7.65 **A bottom-up initiative.** Another novel characteristic of the Pilot is that it was conceived by senior economists who had to work through the ranks to eventually gather enough support from senior management. The economists won this support because they showed that the Pilot was helping to better understand a tool capable of reducing greenhouse gases. They also explained that departments could influence the design of this tool, which made it important for them to participate.

7.66 **Learning from experience.** Learning is the main objective of the Pilot, and evaluation is built into its operating procedures. For example, the main company involved in the first project of emission-reduction trading to be evaluated now sits on a technical committee to help it correct problems experienced with the project. A consultant conducted a formal interim evaluation of the Pilot in 1999.

7.67 The Pilot was extended for two years in December 1999. In March 2000, the Joint Committee of Environment and Energy Ministers met to discuss "credit for early action" proposals from federal and provincial officials. The Pilot participants recognized that decisions from that meeting would play a key role in determining the Pilot's future, particularly its pertinence for industry and environmental organizations. However, the Joint Committee did not make any decision on the issue other than to "ask

"When participants express their interests, in a transparent way — rather than take a position — it is easier to understand each other and to find a common ground."

A representative from an environmental organization

officials to consider a system to credit verifiable early action."

"Agreements are about relationships."

A federal official

"You want to give flexibility to the provinces on how to achieve objectives. Agreements should focus on results, not on the process."

Provincial and federal officials and industry representatives

Conclusion

7.68 Successful co-operation agreements depend on a mix of subjective and objective considerations. The five case studies in this chapter demonstrated the importance of relationships where partners build and maintain trust between them. They showed that leadership and commitment from all parties involved are essential as well as public and political support. Finally, they confirmed that partners need the discipline to follow all the necessary steps during the life cycle of an agreement. The key to a successful co-operation agreement is to meet all or most of these conditions.

7.69 The case studies illustrated how the presence (or absence) of these elements affects an agreement's success. They also provided examples of the "tight-loose" working relationship referred to in Chapter 5 of this Report. The relationship is one that is "tight" (or strict) on the results that partners have to achieve based on intergovernmental agreement and "loose" (or lenient) on the way they achieve them in the particular circumstances of each jurisdiction.

7.70 Entering into an agreement between federal, provincial and territorial governments is not an end in itself. However, when governments agree on a common issue and on the need for concerted action and when they meet certain conditions, working together can help them achieve their objectives.

About the Study

Objective

The objective of this study was to examine key factors in the development and maintenance of successful intergovernmental co-operation on sustainable development issues.

Scope and Approach

To carry out this study, we drew upon related audits and studies carried out by our Office, reviewed academic papers and conducted selected casework relating to federal involvement with other levels of government.

We selected five case studies to illustrate a range of federal, provincial and territorial co-operation agreements, both Canada-wide and with selected provinces. Each agreement involved, to different degrees, partners from industry and environmental organizations. For each of them, we did not try to present an exhaustive evaluation. Rather, we focussed on the key factors that ensured or impeded the success of the agreement.

To identify good practices or problems, we conducted 78 interviews with 120 people, including federal and provincial public servants, industry officials and representatives of environmental organizations. The majority of these people were directly involved in one or more of the five case studies. We held most of our interviews in Ottawa, British Columbia, Manitoba, Quebec and New Brunswick. We also reviewed documentation related to each agreement.

As much as possible, we tried to discuss how the presence (or absence) of a key factor could affect the success of an agreement. In defining this success, we referred to the intended outcomes stated in the agreement and focussed on the objectives for which specific targets and time frames had been proposed. However, we did not conduct a full evaluation of the agreement's effectiveness (the extent to which the agreement's objectives were achieved). Nor did we evaluate their efficiency (whether they could have achieved the same objectives with less money or done more with the same amount of money).

We believe the lessons drawn from the case studies apply to most co-operation agreements between federal, provincial and territorial governments. However, the study cannot be generalized to determine the effectiveness of all these agreements.

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Appendix

Environment and Sustainable Development: Areas of Shared Jurisdiction

When the *British North America Act*, Canada's original constitution, was enacted in 1867, the concept of environment did not exist as we know it today. The constitution did not stipulate who, between the provincial and the federal governments, was responsible for maintaining a healthy environment for Canadians. Rather, both levels of government were given powers that permitted them to pass legislation to deal with environmental issues.

Until the end of the 1960s, provincial governments assumed the leadership on environmental issues and the federal government had limited involvement. Because the constitution gave provinces power over the management and sale of provincial public lands, they were the custodians of a large share of natural resources. The provinces allocated rights to forests, minerals, and oil and gas and regulated the production and conservation of those resources within their boundaries. Other early environmental legislation responded to local health concerns and, thus, reinforced municipal and provincial pre-eminence in the environment. Fisheries, a federal jurisdiction, was then one of the primary environmental matters where intergovernmental co-ordination was an issue with the federal government responsible for inland and seacoast fisheries management.

Partly in response to public calls for stronger action against water and air pollution, the federal government became more proactive in the protection of the environment in the early 1970s. It created Environment Canada in 1972 then enacted a series of federal environmental laws. In the 1970s, 1980s and 1990s, the federal government remained active in the environment, sometimes playing a prominent role, sometimes keeping a lower profile and leaving the leadership to the provinces.

The shared legislative jurisdiction has contributed to questions over the division of roles between the federal government and the provinces. The constitutional basis for provincial involvement rests firmly on provincial jurisdiction over municipal affairs, property and civil rights, and local or private matters. Likewise, the federal power to enact laws on crime, interprovincial and international trade and commerce and the "residual" power to make laws for peace, order and good government provide a solid basis for federal intervention on environmental issues.

Overall, federal legislation relevant to environmental management includes enactments for:

- monitoring of the state of the environment and assessment of the environmental impact of projects that involve the federal government;
- controls over water pollution and international air pollution;
- notification, registration and regulation of chemicals, including ozone-depleting substances;
- marine pollution;
- interprovincial and international trade in energy resources;
- nuclear energy;
- exploitation of offshore petroleum resources;
- management of hazardous materials and dangerous goods;
- fisheries;
- wildlife protection;
- international rivers and migratory birds;

- use of fiscal measures of taxation and decisions on federal spending; and
- management of the Arctic and its resources.

Many environmental issues subject to federal enactments are also subject to provincial laws and regulations. For instance, air quality, the protection of endangered species and climate change concern federal and provincial governments. Therefore, co-ordination between governments is key to an array of environmental initiatives.

Sources:

Gardner, Alex, *Federal Intergovernmental Cooperation on Environmental Management: A Comparison of Developments in Australia and Canada*, 1994

Maclellan, Duncan, *Shifting From the Traditional to the New Political Agenda: The Changing Nature of Federal-Provincial Environmental Relations*, 1995

Morton, F.L., *The Constitutional Division of Powers With Respect to the Environment in Canada*, 1996

Standing Committee on Environment, *Environment and the Constitution*, March 1992

Chapter 8

Working With the Private Sector

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Working With the Private Sector

Main Points

8.1 The purpose of our study was to draw to Parliament's attention the use of co-operative arrangements between government and the private sector to achieve environmental and broader sustainable development goals. There has been an increase in the use of such arrangements, which include negotiated rule making, flexible approaches to enforcement, voluntary codes of conduct and agreements.

8.2 Concerns have been raised about the accountability, credibility and effectiveness of co-operative arrangements. These types of arrangements are relatively new so that general conclusions about their effectiveness can not yet be reached. We noted their benefits and challenges, and the lessons that can be applied to address these concerns.

8.3 Co-operative arrangements offer a promising and imaginative way to solve many problems of priority setting, equity and efficiency that come with building an approach based on the principles of sustainable development. However, they must be developed and implemented with care. A co-operative arrangement is one of many approaches to implementing public policy and is not appropriate for solving all problems. It is most effective when it is carried out within a strong framework of regulation and enforcement.

8.4 Government cannot delegate its accountability for achieving public policy objectives and protecting the public good. To address this accountability through the use of co-operative arrangements, government needs to set clear objectives, establish management and reporting mechanisms to ensure transparency, and consult when identifying participants and other interested parties.

Background and other observations

8.5 The case studies in this chapter draw attention to the innovative use of co-operative arrangements to develop solutions to environmental and broader sustainable development problems, to implement these solutions and to contribute to the policy agenda. They highlight opportunities and challenges across a range of policy tools, from improving effectiveness of regulation to advancing a management approach, to demonstrating and encouraging integrated decision making.

8.6 We noted how co-operative arrangements have the potential to allow both public and private sector organizations to extend their reach beyond their core competencies and constituencies. By concentrating a variety of resources, perspectives and capabilities, parties can meet their objectives more effectively. They can identify new and innovative solutions to address the concerns of different interested parties.

8.7 The establishment of co-operative initiatives presents a number of challenges. There is a need to determine where compatible goals and mutual benefits exist for each of the parties. Finding the right participants, securing resources, establishing relationships and building trust take time and patience. Agreeing on the respective roles and responsibilities of the participants requires commitment and attention to detail.

Introduction

8.8 The public and private sectors are interested in using more co-operative approaches to achieve environmental and broader sustainable development goals. Canada, the United Kingdom, the United States and many other countries have adopted new co-operative policy instruments, such as negotiated rule making, flexible approaches to enforcement, voluntary codes of conduct and agreements.

8.9 A number of factors are contributing to this development. Issues are becoming more complex, more global in scope and more costly to resolve. The increasing globalization of commerce reduces the ability of national governments to independently regulate activities. While adversarial approaches are appropriate to enforce laws, the result in jurisdictions with a predisposition to litigation is often gridlock rather than progress. As a consequence, there is a greater mismatch between environmental challenges and the strategies used to resolve them.

8.10 Companies are increasingly adopting an approach to environmental considerations that goes beyond compliance with regulation. They are looking to become more active in addressing environmental and emerging social issues. This decision reflects a growing indication in the business community that industry, as part of the problem, wants to be part of the solution.

8.11 Public opinion on environmental issues has been effective in eliciting increased commitment from the private sector. Business better understands the economic value of superior environmental performance and social responsibility. As companies recognize the benefits of a management-based approach, government is looking at new opportunities to work with the private sector. For example, industry can contribute expertise in its products and processes to the development of new regulatory regimes and public policy approaches. A more multi-facetted relationship between government and business can foster the innovative and collaborative elements required to resolve current environmental and sustainable development problems.

8.12 Sustainable development implies that environmental protection, social well-being and economic activity are part of the same strategy that a more co-operative process would produce. Co-operative arrangements offer a promising and imaginative way to solve many problems of priority setting, equity and efficiency that come with building an approach based on the principles of sustainable development.

8.13 However, such arrangements must be used with care. A co-operative arrangement is one of many approaches to implementing public policy, and a relatively new one. People repeatedly told us that a co-operative arrangement is most effective when it is carried out within a strong framework of regulation and enforcement.

8.14 Governments often balance multiple policy objectives when they choose policy tools. These objectives include addressing business concerns about the impact of inflexible regulation on competitiveness, avoiding the costs of regulatory programs in times of deficit reduction, and addressing public concern for improved environmental practices and sustainable development.

8.15 Given the discernible shift to more co-operative arrangements, our interest was in the accountability, credibility and effectiveness of such initiatives. It is too early to draw conclusions about their effectiveness. However, one key requirement for assessing effectiveness is a commitment to measure, evaluate and report results from the outset.

Government and business are interested in using more co-operative approaches to achieve environmental and broader sustainable development goals.

Co-operative arrangements offer promising and imaginative solutions to many issues. However, such arrangements must be used with care.

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Focus of the study

8.16 Government works with the private sector in many different ways, from sharing information and consulting to creating new entities that deliver a good or service. In the areas of the environment and sustainable development, government and industry carry out co-operative arrangements that include negotiated agreements, challenge programs and regulatory exemption programs.

8.17 While there is an information sharing or education component in most (if not all) co-operative arrangements, we do not view this component as an end in itself. Rather, it is part of establishing relationships and exploring options for what a co-operative arrangement might undertake.

8.18 For this study, we selected co-operative arrangements that involve partners from government and the private sector working together to achieve a tangible product or result. Exhibit 8.1 presents the characteristics of the types of co-operative arrangements that were the focus of this study. Some arrangements were in their very early stages and did not yet have all of these characteristics.

8.19 We selected our case studies to illustrate two points. First, co-operative approaches can be used to develop solutions to environmental, social and economic problems, to implement these solutions and to contribute to the broader policy agenda. Second, co-operative approaches can be used to strengthen the environmental performance of organizations. They allow them to move beyond regulatory compliance to environmental management and then to integrated decision making that focusses on the triple bottom line of sustainable development — environmental, economic and social concerns.

8.20 We did not focus on alternative service delivery mechanisms. We looked, though not in detail, at arrangements referred to as "voluntary non-regulatory initiatives" and we conducted a case study of such an arrangement, Canada's National Packaging Protocol.

8.21 Further details about the study's objectives and scope are given at the end of this chapter.

Observations

Public-Private Pathways Toward Sustainability

The journey from improved regulation to sustainable development

8.22 We introduced the notion of the journey toward sustainable development in our May 1998 Report, Chapter 5, Expanding Horizons — A Strategic Approach to Sustainable Development.

8.23 We have used the symbol of a journey in this study to show how innovative, co-operative arrangements are helping governments move from improved

Exhibit 8.1

Characteristics of Co-operative Arrangements Selected for Our Study

The co-operative arrangements in this study:

- have a common goal that single partners would be unable to attain on their own;
- involve all partners in the planning process;
- rely on partners' shared commitment to a common goal that is clearly defined;
- function with resources provided by each partner;
- present a shared risk for all partners;
- offer mutual benefits to all partners; and
- provide a public good or service.

regulation to sustainable development (see Exhibit 8.2). Co-operative arrangements can be used at each stage of this journey to contribute to the policy agenda, to develop solutions and to implement them.

8.24 In the private sector, the journey sees companies strengthening their environmental performance. They move beyond compliance with regulation to environmental management and on to integrated decision making.

8.25 In the public sector, governments begin the journey by improving compliance with and effectiveness of regulation. Then they advance an environmental management approach by promoting individual tools and supporting the development of new management systems. Finally, they demonstrate, encourage and facilitate decision making that integrates economic, environmental and social considerations.

8.26 As we noted in our 1998 study, this journey is not one of sequential or discrete stages. Organizations pursue activities in more than one stage at a time. For example, companies comply with regulations as a minimum practice, while they develop and implement environmental management systems.

8.27 Similarly, in the public sector a strong regulatory framework provides a minimum standard for behaviour and a solid foundation from which to pursue more co-operative initiatives. During our study, people repeatedly expressed the need for a strong regulatory framework as a foundation for other approaches to government policies and programs. Governments can then work more effectively with the private sector to advance public policy objectives through improved management and better decision making.

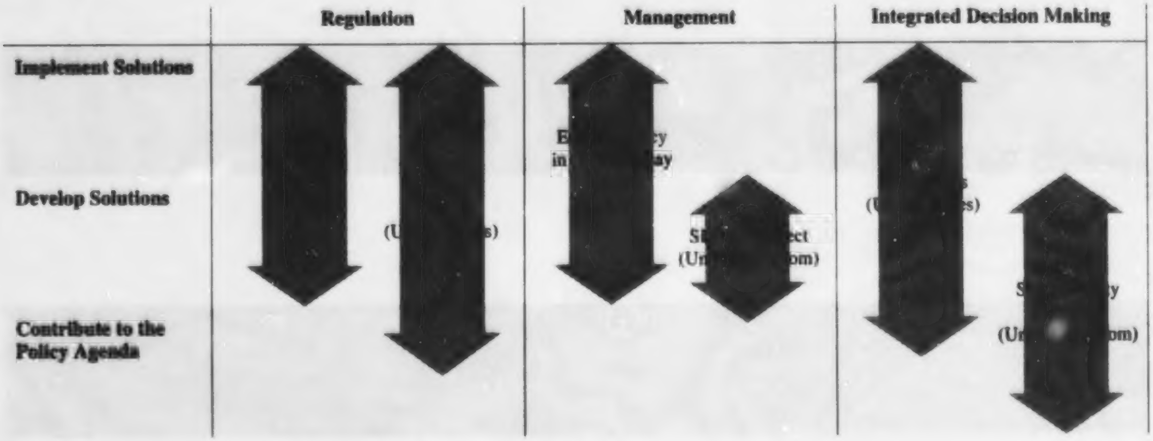
Co-operative arrangements are helping governments improve regulation, environmental management and integrated decision making.

Improving the Effectiveness of Regulation

8.28 Governments use a wide range of legislative and regulatory instruments to achieve policy objectives. They are also expanding their tool kits to include other instruments to meet those objectives, while reducing administrative costs and providing an ongoing incentive for innovation and improved performance.

Exhibit 8.2

Our Case Studies Along the Journey Toward Sustainable Development



Focus of the study

8.16 Government works with the private sector in many different ways, from sharing information and consulting to creating new entities that deliver a good or service. In the areas of the environment and sustainable development, government and industry carry out co-operative arrangements that include negotiated agreements, challenge programs and regulatory exemption programs.

8.17 While there is an information sharing or education component in most (if not all) co-operative arrangements, we do not view this component as an end in itself. Rather, it is part of establishing relationships and exploring options for what a co-operative arrangement might undertake.

8.18 For this study, we selected co-operative arrangements that involve partners from government and the private sector working together to achieve a tangible product or result. Exhibit 8.1 presents the characteristics of the types of co-operative arrangements that were the focus of this study. Some arrangements were in their very early stages and did not yet have all of these characteristics.

8.19 We selected our case studies to illustrate two points. First, co-operative approaches can be used to develop solutions to environmental, social and economic problems, to implement these solutions and to contribute to the broader policy agenda. Second, co-operative approaches can be used to strengthen the environmental performance of organizations. They allow them to move beyond regulatory compliance to environmental management and then to integrated decision making that focusses on the triple bottom line of sustainable development — environmental, economic and social concerns.

8.20 We did not focus on alternative service delivery mechanisms. We looked, though not in detail, at arrangements referred to as "voluntary non-regulatory initiatives" and we conducted a case study of such an arrangement, Canada's National Packaging Protocol.

8.21 Further details about the study's objectives and scope are given at the end of this chapter.

Observations

Public-Private Pathways Toward Sustainability

The journey from improved regulation to sustainable development

8.22 We introduced the notion of the journey toward sustainable development in our May 1998 Report, Chapter 5, Expanding Horizons — A Strategic Approach to Sustainable Development.

8.23 We have used the symbol of a journey in this study to show how innovative, co-operative arrangements are helping governments move from improved

Exhibit 8.1

Characteristics of Co-operative Arrangements Selected for Our Study

The co-operrtive arrangements in this study:

- **have a common goal that single partners would be unable to attain on their own;**
- **involve all partners in the planning process;**
- **rely on partners' shared commitment to a common goal that is clearly defined;**
- **function with resources provided by each partner;**
- **present a shared risk for all partners;**
- **offer mutual benefits to all partners; and**
- **provide a public good or service.**

regulation to sustainable development (see Exhibit 8.2). Co-operative arrangements can be used at each stage of this journey to contribute to the policy agenda, to develop solutions and to implement them.

8.24 In the private sector, the journey sees companies strengthening their environmental performance. They move beyond compliance with regulation to environmental management and on to integrated decision making.

8.25 In the public sector, governments begin the journey by improving compliance with and effectiveness of regulation. Then they advance an environmental management approach by promoting individual tools and supporting the development of new management systems. Finally, they demonstrate, encourage and facilitate decision making that integrates economic, environmental and social considerations.

8.26 As we noted in our 1998 study, this journey is not one of sequential or discrete stages. Organizations pursue activities in more than one stage at a time. For example, companies comply with regulations as a minimum practice, while they develop and implement environmental management systems.

8.27 Similarly, in the public sector a strong regulatory framework provides a minimum standard for behaviour and a solid foundation from which to pursue more co-operative initiatives. During our study, people repeatedly expressed the need for a strong regulatory framework as a foundation for other approaches to government policies and programs. Governments can then work more effectively with the private sector to advance public policy objectives through improved management and better decision making.

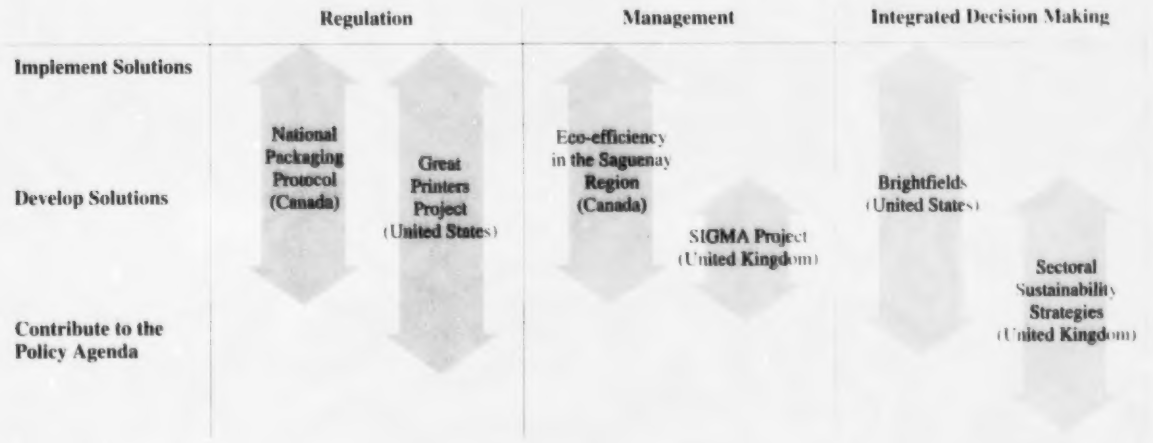
Improving the Effectiveness of Regulation

8.28 Governments use a wide range of legislative and regulatory instruments to achieve policy objectives. They are also expanding their tool kits to include other instruments to meet those objectives, while reducing administrative costs and providing an ongoing incentive for innovation and improved performance.

Co-operative arrangements are helping governments improve regulation, environmental management and integrated decision making.

Exhibit 8.2

Our Case Studies Along the Journey Toward Sustainable Development


Regulation
Management
Integrated Decision Making
Implement Solutions
Develop Solutions
Contribute to the Policy Agenda
National Packaging Protocol (Canada)
Great Printers Project (United States)
Eco-efficiency in the Saguenay Region (Canada)
SIGMA Project (United Kingdom)
Brightfields (United States)
Sectoral Sustainability Strategies (United Kingdom)

8.29 We heard that regulation — or the threat of increased regulation — plays a necessary role in motivating industry to find solutions to environmental problems. It can also level the playing field for companies looking to benefit by taking action ahead of their competitors. Furthermore, government can better ensure compliance with regulation if it works with industry.

Regulation — or the threat of increased regulation — plays a necessary role in motivating and supporting co-operative arrangements.

The National Packaging Protocol

Challenging industry with regulatory consequences

8.30 In the late 1980s, all levels of government in Canada were under intense pressure to resolve a "solid waste crisis". In April 1989, the Canadian Council of Ministers of the Environment (CCME), representing the provinces, the territories and the federal government, called for the development of a National Packaging Protocol (NaPP). The Protocol was to contain targets and a schedule for achieving a 50 percent reduction in waste going to landfill by 2000. The CCME formed the National Task Force on Packaging to prepare the Protocol for the spring of 1990.

8.31 The Task Force members represented industry, consumer and environmental groups as well as federal, provincial, territorial and municipal governments. Their Protocol, which the CCME approved in 1990, identified interim targets for waste reduction of 20 percent by 1992 and 35 percent by 1996 toward the ultimate goal of 50 percent reduction by 2000.

8.32 The CCME challenged the packaging industry to meet the interim targets voluntarily. In case they chose not to do so, it made clear that regulations would be prepared immediately to achieve the necessary reductions. Industry met the targets in 1996, ahead of schedule, and reduced its waste going to landfill by 51 percent. With budget constraints announced that same year and the 2000 target already reached, the CCME wound down the activities of the Task Force.

8.33 The voluntary process of the Protocol gave the packaging industry flexibility to meet the targets. This process is considered to have delivered the desired environmental benefits and to have saved costs over other approaches. It is also believed that the voluntary process won broader participation and yielded concrete results more quickly than would have been possible through a traditional regulatory approach.

8.34 The benefits, however, extended beyond waste reduction. The initiative spurred investment and innovation in new products, equipment, packaging design and technologies that, according to participants, have resulted in substantial savings and competitive advantage. In addition, the multi-stakeholder partnership helped to form important new relationships and gain new perspectives on challenges associated with waste reduction. The benefits of these networking relationships are expected to continue beyond the term of the Task Force.

8.35 There are many lessons to be learned from the NaPP experience. In a co-operative arrangement, the roles, responsibilities and capacities of the

National Packaging Protocol

Baseline estimates for 1988 indicate that 5.4 million tonnes of packaging waste were sent to landfill in Canada. As a result of the National Packaging Protocol and the widespread commitment to its outlined policies, this quantity was reduced to 2.64 million tonnes in 1996, representing a 51 percent reduction in annual packaging waste. (See paragraph 8.32.)

Source: Industry Canada

various players need to be clear. A number of participants in the NaPP thought that it was possible to develop a packaging policy with a nationally harmonized approach and that either the CCME or the federal government was in a position to deliver such a result. This was not the case and it became a challenge to keep all of the participants at the table when a number of provinces began introducing their own regulations.

8.36 It is also necessary to be clear on definitions and to speak the same language. In more than one instance, either agreement on definitions in the Protocol was not reached or the definitions were not clear.

8.37 Finally, participants felt that the role of regulation in this initiative was well understood: it would be used only if targets were not met. Yet a number of provinces proceeded to regulate packaging waste despite the fact that the targets had been reached. This made some participants think that the Protocol's rules of engagement had been broken. The high public profile of the partnership and the perceived cost in public relations of withdrawing from the process kept these partners at the table.

8.38 Many factors contributed to the success of the NaPP. Considerable resources — a total of more than $2.6 million — were invested in measuring and reporting performance at each target date. All of the participants we interviewed affirmed that Environment Canada's role as secretary provided vital support to the initiative. Perhaps most important, both the key performance objective of the NaPP and the consequences of inaction were clear. The packaging industry perceived the threat of a patchwork of regulations across the country, which significantly motivated it to participate in the initiative.

The Great Printers Project

Adapting regulation for pollution prevention and economic gain

8.39 Regulations have been criticized for failing to provide incentives for companies to go beyond compliance. They have also been criticized for focussing on specific environmental media (such as air, land or water), for focussing on specific pollutants and often for encouraging less desirable end-of-pipe solutions. However, nothing says that regulation must specify control techniques or limit its focus to individual media. Engaging industry in a co-operative way to develop and implement regulations can improve the effectiveness of regulations and produce environmental and economic benefits.

Engaging industry in a co-operative way to develop and implement regulations can improve the effectiveness of regulations and produce environmental and economic benefits.

8.40 The printing industry holds great economic importance in the American states around the Great Lakes. The Council of Great Lakes Governors, the Environmental Defense Fund and the Printing Industries of America recognized that the industry would face increasing pressure from regulation to improve its environmental performance. For this reason, they launched the Great Printers Project in 1993.

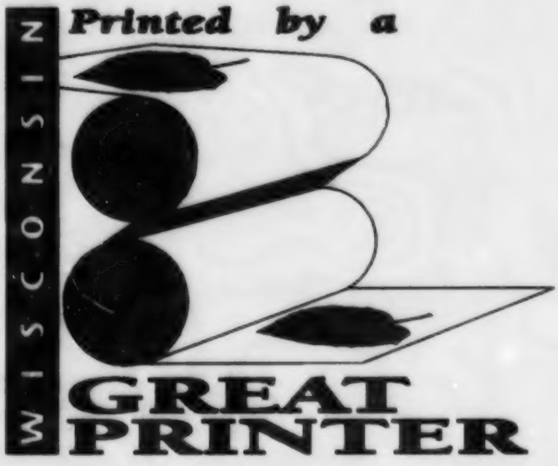
8.41 The Project brought together representatives from state and federal regulators, the printing industry and its supplier companies, labour and environmental groups. The common goal was to reinvent the system of environmental regulation. Project participants were to move beyond regulation to true prevention and streamline the means by which the Environmental Protection Agency seeks health and environmental protection, while improving the economic strength of the printing industry.

8.42 In July 1994, the partners released a report that contained recommendations to improve the regulatory system. Four states have since carried out pilot implementation projects and programs to recognize the environmental commitments and achievements of the Great Printers Project.

8.43 To date, over 350 printers have agreed to meet the Project's requirements. They include:

- to comply with regulation;
- to employ the most environmentally sound practices; and
- to seek continuous improvement of their environmental impacts.

8.44 Federal and state regulators reduced redundancy in the requirements for obtaining permits and filing reports. They also agreed to create a level playing field through more efficient enforcement efforts, and clarified how they would use reported information. It is now easier for printers to understand their obligations and learn about pollution prevention. The Printers' National Environmental Assistance Center provides printers with an on-line source of pertinent, reliable and up-to-date information on pollution prevention and environmental compliance. For its part, the Environmental Defense Fund encouraged other environmentalists to step outside their traditional advocacy roles and help build demand for cleaner, greener printing.



Great Printers Project

Developed by the printing industry, the Great Printer's seal is used to identify companies committed to offering quality printing and to minimizing their impact on human health and the environment. Each of the four states that participated in the pilot project created a seal to be used by companies fulfilling the requirements of the Great Printers Project. (See paragraph 8.47.)

Source: Wisconsin Department of Natural Resources

8.45 There are a number of benefits to the approach of the Great Printers Project over a traditional regulatory approach. Regulating small and medium-sized enterprises can be expensive and inefficient, yet the aggregate impact of these businesses on the environment is substantial. As well, in this case medium-sized companies have the same monitoring and reporting requirements as large companies, though they lack the same resources to comply. As a result, regulators do not receive the information they need and it is unclear whether medium-sized companies are meeting the performance requirements.

8.46 The Great Printers Project approach improves the regulator's effectiveness in reducing harmful environmental impacts by showing companies the benefits of pollution prevention. It helps the regulator to better understand the industry and helps the industry — which is difficult to influence with regulation — to improve its performance.

8.47 Thanks to the Great Printers Project, industry participants can lower costs and improve their reputation, enjoy access to "one-stop shopping" for regulation requirements and reporting formats, and get advice on compliance and other opportunities for pollution prevention. Qualifying companies may use the Great Printers seal in marketing their products and services.

8.48 Considerable effort and resources are still required to achieve the widespread, comprehensive changes proposed in the partners' 1994 report and to incorporate these changes into the daily operations of all the regulatory bodies concerned. Nonetheless, the Great Printers Project has increased the visibility of pollution prevention as a preferred business practice and has accelerated movement to this end.

8.49 The commitment of senior personnel from each partnership organization launched the Great Printers Project. Strong relationships among the main players at the table created a climate of trust, collaboration and consensus. The Project's steering group adopted a shared governance structure early. All parties jointly made key decisions on the direction of the Project, meeting agendas, process and other issues. This collaboration meant that they had to share the decision-making authority. Furthermore, there was an extensive effort to keep all potentially interested parties informed and to seek feedback on the recommendations. In particular, senior managers attended special briefings at the Environmental Protection Agency to obtain its endorsement and support for implementing the Project.

8.50 Together, participants in the Great Printers Project created a unique partnership that has been a model for developing more effective environmental regulation. The Agency has endorsed the approach used in the Project and has introduced this approach more widely through its programs.

Advancing a Management Approach

8.51 Regulation is one policy option available to government to achieve improved environmental performance and pursue sustainable development goals. Other options are the power to spend and to provide encouragement. The use of other options in co-operative approaches can lead government to play new roles, including those of business partner, coalition builder, catalyst and enabler. As government moves to supplement regulation by supporting and promoting new management approaches, these roles become more evident. New challenges also arise. For example, many of our interviewees told us that there is a crucial need to find government personnel who know the drivers and culture of business.

Eco-efficiency in the Saguenay region

Introducing a management tool for improved environmental performance

8.52 In 1997, Alcan Aluminium Limited made commitments to strive for environmental leadership and to work with its suppliers to better understand and minimize environmental impacts. The company and Natural Resources Canada initiated the Saguenay partnership to conduct a pilot project on introducing eco-efficiency concepts — reduced environmental impact and resource consumption — to small and medium-sized businesses. In the long term, these businesses were expected to benefit from improved economic and environmental performance.

Co-operative approaches can lead government to play new roles, including those of business partner, coalition builder, catalyst and enabler.

8.53 For Natural Resources Canada, the partnership addressed a number of objectives for sustainable development. In particular, it provided an opportunity to promote sustainable development in practice and to develop a model for doing the same in other regions and industrial sectors across the country.

8.54 The partnership involved a number of other participants, including representatives from local community groups, financial and educational institutions, other federal agencies and the Province of Quebec. Additional funding and other support came from Abitibi-Consolidated Limited and the National Research Council's Industrial Research Assistance Program.

It is necessary for government to understand the operational and business needs of the private sector.

8.55 A group of selected university graduates received training in eco-efficiency concepts and tools, learned consulting skills and gained a unique work experience. These graduates, with supervision and support from Alcan, government personnel and others, found ways to improve the environmental performance and competitiveness of participating local companies.

8.56 Alcan collaborated with external environmental expertise and resources and experimented with new tools to fulfil its environmental policy commitment of working with local suppliers. The partnership also enhanced recognition of Alcan's environmental policy and programs and strengthened relationships between Alcan and Natural Resources Canada.

8.57 The Department gained practical insights into applying eco-efficiency concepts in small business as well as valuable experience for developing other such partnerships. It now has a kit of training material that has been tested in the field and can be used in future projects.

Eco-efficiency in the Saguenay

After completing a three-week training period, graduate advisors worked with a small or medium-sized company for three months using eco-efficiency tools. Their role was to assist with the analysis of the company's situation, evaluate options for improvement and create a plan of action with the goal of improving environmental and economic performance. (See paragraph 8.55.)

Source: Natural Resources Canada

8.58 Small and medium-sized businesses received advice on eco-efficiency. Some have already begun to realize tangible savings. The graduates learned about environmental issues and management tools, while gaining valuable work experience. And the Saguenay region made progress toward achieving regionally based sustainable development goals and showcasing sustainability practices and decision making.

8.59 Through this co-operative arrangement, partners were able to benefit from expertise, networks and other resources necessary to realize their objectives. As a result, the outcome of the arrangement exceeded what each partner could have accomplished on its own. It is difficult for government to reach small and medium-sized businesses. However, working with a large company helped Natural Resources Canada to overcome this obstacle and introduce new management tools to these businesses.

8.60 While partners were not without their challenges, excellent communication and a clear focus on common and tangible objectives allowed them to resolve issues and achieve their goals. A steering committee, established to direct and monitor the pilot project, maintained close contact with the partners and responded to their concerns in a timely and constructive manner. When unclear roles and responsibilities impeded progress, highly committed and effective individuals ensured the successful completion of the project.

8.61 Key to this partnership was Natural Resources Canada's understanding of the operational and business needs of the private sector. The Department kept administrative burdens to a minimum and, thanks to internal co-ordination, spoke to other partners with one voice.

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The SIGMA Project

Designing the next generation of a management system for sustainable development

8.62 The United Kingdom's sustainable development strategy, revised in May 1999, included a government commitment to sponsor the creation of a sustainability management system, the SIGMA (Sustainability: Integrated Guidelines for Management) Project. The Department of Trade and Industry (DTI) and the Department of the Environment, Transport and Regions sponsored this co-operative initiative. The Project was launched in July 1999 with funding from the DTI's new Sustainable Technologies Initiative.

8.63 The SIGMA Project has brought together the expertise of the British Standards Institution and two non-governmental organizations: Forum for the Future and the Institute of Social and Ethical AccountAbility. Its overall objective is to look at the "need for decision-making tools that can address the complexities and extended time-frames of sustainability in a clear and strategic way" (see Exhibit 8.3). The result will be the next generation of a management system for sustainable development that can be applied across industry. The first phase of the Project, one of research and development, was completed in April 2000.

8.64 During the second phase, currently under way, companies are testing the components of the management system. The organizing partners are seeking 20 companies to pilot new tools and standards as they are being developed. These companies have already begun to examine environmental and social issues in their businesses and will contribute their learning from their experiences. Non-governmental and research organizations are conducting new research. Other stakeholders, including education institutions, trade associations and professional bodies, have been invited to contribute ideas and expertise. To date, almost 150 organizations have shown an interest.

8.65 The SIGMA Project demonstrates that government can act as catalyst and convenor in public-private partnerships. These roles are necessary because sustainable development involves a variety of issues and a wide range of stakeholders who not only give their expertise but also make the process and its results more credible. In these circumstances, government is in a unique position to encourage different parties to participate; however, it may depend on the collaboration of a number of departments.

8.66 While the SIGMA Project is in its early stages, certain factors have clearly contributed to its progress. A strong and shared belief in the Project's objective and importance lies at the core. The sponsors have paid particular attention to having economic, environmental and social experts among the principal partners. In addition, the partners have designed a

Exhibit 8.3

Issues the SIGMA Project Will Address

- Biodiversity
- Carbon management
- Community investment
- Competitiveness
- Corporate governance
- Eco-efficiency
- Employee learning
- Ethical and fair trading
- Full-cost accounting
- Green transport plans
- Health and safety
- Innovation
- Intangible assets
- Integrated product policy
- Product stewardship
- Reporting
- Reputation management
- Risk assessment
- Scenario planning
- Social accountability
- Shareholder relations
- Stakeholder dialogue
- Supply chain management
- Waste minimization

Source: British Standards Institution

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- Waste minimization

Source: British Standards Institution process that involves all interested parties and relies on communication and transparency.

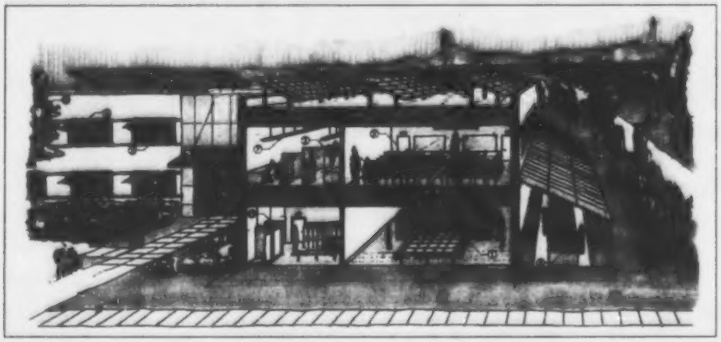
Demonstrating and Encouraging Integrated Decision Making

8.67 Management tools generally seek to harmonize two of the three elements of sustainable development, the environment and the economy. The SIGMA Project is trying to take the management approach beyond existing environmental systems by including the social element. Moving to decision making that integrates environmental, economic and social factors is the next step toward sustainable development. Our case studies in this section are an example of co-operatively developing and implementing solutions and an example of working together to translate the agenda of broad public policy into private sector action.

Brightfields

Building economic, environmental and social benefits

8.68 Brightfields is a national initiative of the United States Department of Energy that aims to overcome the challenges of urban revitalization, toxic waste clean-up and climate change. The term "Brightfields" refers to the conversion of abandoned, contaminated industrial sites (brownfields) into usable land. The program brings to these sites pollution-free solar energy and creates jobs in high-technology solar manufacturing. The program can take many forms, such as placing photovoltaic arrays that can reduce clean-up costs, building integrated solar energy systems as part of redevelopment, and locating solar manufacturing plants on sites.



Brightfields

A conceptual schematic of the "green" building rehabilitation prepared for the Brightfields project in Chicago, Illinois.

The building houses a community training centre, a solar cell manufacturer, Greencorps and commercial office space. It also incorporates energy efficiency and resource conservation. The site design includes a greenhouse, rooftop solar panels, energy-efficient landscaping and a rainwater capture system. (See paragraph 8.70.)

Source: City of Chicago

8.69 As developer, facilitator and initial funder of the program, the Department of Energy brought together the City of Chicago and Spire Corporation, a leading company in the photovoltaic industry, to launch the first venture under Brightfields. The City of Chicago, with the Department and the electric utility Commonwealth Edison, developed an extensive plan to help the three parties reach their goals for economic development, climate change, air quality, and electricity reliability.

8.70 Spire Corporation, under the name Spire Solar Chicago, will create over 100 new jobs to manufacture solar panels on a brownfield in Chicago. A two-story building on the site will be rehabilitated and made into the headquarters of Spire Solar Chicago and Greencorps Chicago, a program that offers training in community gardening. Chicago's Department of Environment and the American Institute of Architects' Environment Committee will redesign the building with a greenhouse, energy-efficient landscaping and a system that reuses captured rainwater. The headquarters will also have a solar energy system to supply electricity and show the public how it works.

8.71 The City of Chicago and Commonwealth Edison jointly have committed US$8 million to purchase solar systems in the next two years. The solar systems will be installed on other brownfields as well as schools, office buildings, transportation routes, and municipal and commercial properties. Over the next five years, Commonwealth Edison's generating system will increase energy reliability and improve air quality by preventing the production of up to 25 million pounds of carbon dioxide.

8.72 For the Department of Energy, partnerships are key to the way its research and development group, the Energy Efficiency and Renewable Energy Network, conducts its work. Not only do they provide cost-sharing opportunities, they also increase the likelihood that the group's research and development will result in practical applications. In the sector of renewable energy (energy produced from renewable sources like wind and the sun), an added challenge is the relatively high cost of new technologies. The Department has found a way to spread the risk, reduce the cost and encourage the practical application of one of these new technologies by integrating it into the redevelopment of brownfields.

8.73 The Department of Energy, the City of Chicago and Spire Corporation never lost sight of Brightfield's original objective when they attracted more partners, ideas and resources. This contribution only helped the project to improve and to create economic, environmental and social benefits for all through integrated decision making.

8.74 The Chicago Brightfields project won the commitment of the highest officials in each partnership organization to a set of shared goals with clear benefits for all. However, the project also encountered a number of challenges. One of these is a key challenge to public-private co-operation: Most of the partners, including some public sector organizations, felt that government was not making decisions fast enough. As a consequence, Spire Corporation found it very difficult to commit the time and money required to complete negotiations with its partners.

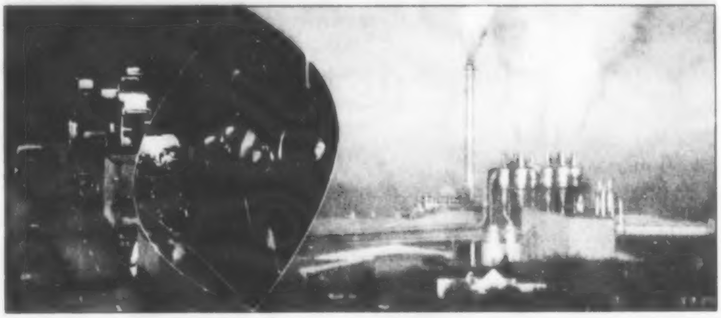
The United Kingdom's sectoral sustainability strategies

Translating public policy into private sector action

8.75 The Government of the United Kingdom (UK) has entered into discussions with a number of trade associations to produce sectoral sustainability strategies. The purpose of these strategies is to guide industry sectors on the type of practical actions they can take to improve their economic, environmental and social performance. The initiative focusses on approaches to sustainable development by sector, in contrast with those by environmental media, such as air or water.

8.76 The UK government published its first national sustainable development strategy in 1994 and revised it in May 1999. This revised strategy contains a policy framework to guide action by the country, regions, communities, individuals, business and labour. It identifies about 150 indicators of progress and a new set of 14 headline indicators around four main objectives.

Partnerships can spread the risk, reduce the cost and encourage the adoption of innovative responses to environmental, economic and social challenges.



Sustainable Development in the United Kingdom

The sustainable development strategy of the United Kingdom (UK) presents the government's commitment to social progress, environmental protection and economic growth. An initiative to develop sectoral sustainability strategies addressing these issues will help the private sector contribute to meeting public policy goals. (See paragraph 8.75.)

Source: UK Department of the Environment, Transport and Regions

8.77 The national strategy sets the government's priorities in public policy and reflects extensive consultations with many groups. As part of a broader consultation, the government identified issues that concerned the business community and sought its views on how to resolve them. Sectoral sustainability strategies were identified as possible tools for a voluntary approach by industry to sustainable development. The strategies would determine the means to turn these public policy priorities into action by the private sector.

A key consideration for government is if and how to use its regulatory and taxation powers while negotiating a co-operative arrangement.

8.78 The benefits of developing a sustainable development strategy are numerous. In preparing the national strategy, the government needed to clearly articulate its thinking on the range of social, economic and environmental issues. It also had to find answers to these issues and identify measures for assessing progress in a way that would help people to understand the issues and their consequences. The government learned a lot from this experience.

8.79 Likewise, as the trade associations develop sectoral sustainability strategies, they will stimulate thinking, analysis and learning in the industry sectors they represent. This exercise will involve understanding general issues of sustainability and the issues that are most important in a given sector. While associations proceed to identify the impacts of these issues, their plans for responding to those impacts, and the way they will measure and report performance improvements in their sectors, their members will learn about the issues and the opportunities for change.

In many cases, co-operative arrangements produce results beyond what any one participant could have accomplished on its own.

8.80 For the government, one of the key outcomes of the sectoral strategies will be the identification of leading practices in various sectors. By identifying and promoting these practices, the government can help to raise the awareness and performance of other sectors.

8.81 The process of developing these strategies allows the government and industry to discuss common problems and options for making progress. Already, discussions have begun on a range of topics from performance indicators to emerging social issues and priorities.

8.82 This initiative is in its very early stages, and how the government and industry can work together is still unclear. While senior management of most participating sectors has publicly given its commitment, it still has to agree on the technical details, such as roles and responsibilities, resource commitments, monitoring and reporting of progress and areas of priority in need of action.

8.83 For industry, one of the major benefits of co-operation is that it would not be subject to more regulation, taxation and other measures as long as it improved its environmental performance. Consequently, a key consideration in this and any public-private initiative is if and how government will use these measures while the co-operative approach is being explored. It is important for government and industry to be clear on the use of other policy options as they move from gaining commitment to implementing the initiative.

Lessons Learned About Co-operative Arrangements

Potential benefits of public-private co-operative arrangements

8.84 We have seen how co-operative arrangements have the potential to allow both public and private organizations to extend their reach beyond their core competencies and constituencies. By concentrating a variety of resources, perspectives and capabilities, parties to an arrangement can meet their objectives more effectively. New and innovative solutions may be identified to address the concerns of different interested parties. More timely execution and lower implementation costs for all parties, including government, can increase efficiency. In many cases, co-operative arrangements produce results beyond what any one participant could have accomplished on its own.

8.85 When the networks of the various parties are involved, increased and more diverse stakeholder participation can lead to more equitable solutions. A broadly inclusive approach increases the credibility of the process and the results. By expanding and sharing decision making, participants can reconcile their differences, find common ground and improve their understanding of complex issues. The opportunity to advance learning and fundamental change in attitude can produce benefits beyond the initiative at hand.

8.86 Government has a number of tools to meet public policy objectives. These tools include regulation, taxation and spending. Co-operative arrangements allow government to achieve its objectives by using the range of policy tools in innovative ways. They also allow industry to make a positive contribution to the policy agenda, to develop solutions and to implement solutions.

Challenges to effective public-private co-operation

8.87 The establishment of any co-operative initiative presents a number of fundamental challenges. There is a need to determine where compatible goals and mutual benefits exist for each of the parties. Finding the right participants, securing resources, establishing relationships and building trust take time and patience. Agreeing on the respective roles and responsibilities of the participants requires commitment and attention to detail.

8.88 Setting and implementing sustainable development policy is a unique undertaking, due to constantly changing knowledge of the environmental and social impacts of economic activity. It is further complicated by the existence of a diverse and growing range of active and empowered stakeholder groups with an interest in the issues. New working arrangements are difficult to establish amid the perceptions and misperceptions of traditional adversaries. The trust and confidence that are necessary in co-operative relationships can be elusive because of the historical positions of government as regulator, business as resister of regulation, and interest groups as advocates.

8.89 Significant differences in organizational culture between the public and private sectors present challenges that were repeatedly drawn to our attention. Differences in terminology and use of language impede meaningful communication. The time needed for decision making and the level of aversion to risk are considerably less in the private sector, which can lead to frustration and even the inability to conclude an arrangement. The preference in business to negotiate one thing in return for another may meet resistance from the principle-based approach of many interest groups. It may also be seen as inappropriate or unworkable by regulatory authorities and incompatible with the requirements of public policy. Finally, the parties may have a significant investment in the status quo that prevents them from openly and constructively adopting new approaches.

Successful co-operation requires compatible goals, mutual benefits, sufficient resources, clear roles and responsibilities and strong relationships.

8.90 There is much information available on the components and characteristics of successful co-operative arrangements to address these challenges. Our Office has done extensive work on collaborative arrangements. In fact, we presented a governing framework for them in the Auditor General's November 1999 Report, Chapter 23, Involving Others in Governing: Accountability at Risk.

8.91 However, there is considerably less information to assist in determining when to adopt a co-operative approach instead of regulation or other policy tools.

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Government needs to set clear objectives, establish management and reporting mechanisms, and involve all interested parties.

To begin to address this challenge, the New Directions Group, composed of senior representatives of Canadian corporations and environmental organizations, published a set of conditions for the use of what it referred to as "voluntary non-regulatory initiatives." These conditions apply equally to other co-operative arrangements (see Exhibit 8.4).

A significant concern

8.92 Government cannot delegate its accountability for achieving public policy objectives and protecting the public good. To address this accountability through the use of co-operative arrangements, government needs to set clear objectives, establish management and reporting mechanisms that ensure transparency, and consult when identifying participants and other interested parties.

Environmental organizations and other non-governmental organizations play an important role in public-private co-operative arrangements.

8.93 The importance of regulation or the threat of regulation encouraging effective co-operation cannot be underestimated. Many people told us that co-operative arrangements need to be used within a strong framework of regulation and enforcement. Such a framework communicates the commitment of government to stated public policy objectives.

Non-governmental organizations as valuable partners

8.94 The majority of the co-operative arrangements we studied included non-governmental organizations (NGOs) as participants and sometimes as leading partners. We believe this reflects the important role that environmental organizations and other NGOs play in public-private co-operative initiatives.

8.95 NGOs contribute many benefits to these initiatives. They bring to the issues their expertise in the environment and other areas, knowledge and a unique perspective. They give more credibility to the initiatives in the eyes of a broader constituency of interested stakeholders. The participation of a nationally or internationally recognized NGO can help to raise the profile of an initiative and add marketing value with the public.

8.96 Many NGOs have distinct networks and contacts worldwide, in government and in the communities of environmental and social activists. These can contribute distinctive points of view and valuable resources. Their experience with consultative processes can be particularly useful in large, inclusive co-operative initiatives.

8.97 We heard that successful NGO partners balance environmental and social needs with economic priorities in seeking workable solutions to an issue. Leading companies and NGOs are actively developing diverse relationships and projects to create business opportunities, while improving environmental performance and social responsibility.

Assessing co-operative arrangements

8.98 In the Auditor General's November 1999 Report, the framework

Exhibit 8.4

Conditions for Using a Co-operative Arrangement

- A supportive public policy framework that includes appropriate legislative and regulatory tools.
- Agreement of interested and affected parties that the arrangement is appropriate, credible and effective to achieve the desired objectives.
- A reasonable expectation of sufficient participation in the arrangement over the long term to meet objectives.
- Clearly defined roles and responsibilities for all parties.
- Capacity of parties involved in development, implementation and monitoring to fulfil their respective roles and responsibilities.

Source: Adapted from the New Directions Group Position on Voluntary Initiatives, 1997 we presented for assessing collaborative arrangements focussed on ensuring credible reporting, establishing effective accountability mechanisms, ensuring adequate transparency and protecting the public interest.

8.99 Applying this framework to our case studies goes beyond the scope of this study. However, the participants in co-operative arrangements whom we interviewed referred to most of the framework's components when they discussed necessary factors for developing and implementing such arrangements.

8.100 They considered on three levels the success of the arrangements in which they participated (see Exhibit 8.5).

8.101 The answers to three questions help to evaluate this success. Did the initiative accomplish its objective to improve a specific element of environmental quality or to promote sustainable development? Did the initiative produce benefits in addition to those produced by resolving the central environmental or sustainable development issue? How well did the process of co-operation work?

8.102 The participants we spoke to clearly emphasized the importance of having a tangible expected result on which to focus both the initiative itself and any assessment of its success.

Conclusion

8.103 Co-operative arrangements between the public and private sectors are increasingly required to deal with complex issues that single entities cannot resolve on their own. The pursuit of sustainable development in particular benefits from innovative, co-operative approaches to regulation and other public policy options.

8.104 In this study, we highlighted how governments are using these approaches to achieve environmental and broader sustainable development goals. We discussed some of the benefits and noted some of the challenges of developing and implementing such approaches, and we described the key role that NGOs can play.

It is important to have a tangible expected result on which to focus both the initiative and any assessment of its success.

8.105 Our case studies showed the emphasis that our interviewees placed on the characteristics of successful co-operative arrangements. Their comments supported the framework for

Exhibit 8.5

Evaluating the Success of Co-operative Arrangements

Direct Goals	• Measure the direct benefits in enhanced environmental quality and sustainable development. • Assess the influence on attitudes and decision making of parties involved.
Indirect Benefits	• Measure the impact on environmental quality in areas other than the central issue. • Measure the impact in non-environmental areas. • Assess the benefits of improved communication among parties.
Process Management	• Review the parties' success in setting and meeting stated goals. • Review the parties' satisfaction with the process, especially in comparison with available options. • Determine the impact on catalyzing new co-operative initiatives and adding to the credibility of co-operative arrangements in general.

Source: Adapted from Long and Arnold, *The Power of Environmental Partnerships*, 1995

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Source: Adapted from Long and Arnold, *The Power of Environmental Partnerships*, 1995 assessing collaborative arrangements, published in the Auditor General's November 1999 Report.

8.106 Our interviewees identified three necessary factors for the success of public-private initiatives. These include:

- a commitment to timely action;
- an understanding of the differences in organizational behaviour between the public and private sectors, for example, the different levels of risk tolerance; and
- the need for initiatives to focus on performance and tangible results.

8.107 More important, they drew to our attention the value of a strong, efficient and effective regulatory framework to stimulate and support effective co-operative initiatives.

About the Study

Objectives

We undertook this study to draw Parliament's attention to the use of co-operative arrangements between government and the private sector for achieving environmental and broader sustainable development goals. In their first sustainable development strategies, many departments identified the need to establish a partnership with the private sector.

The objectives of our study were to:

- highlight how governments are using innovative, co-operative arrangements to address environmental and broader sustainable development goals;
- describe the potential benefits of co-operative arrangements between the public and private sectors;
- explain the challenges facing the development and implementation of such arrangements;
- describe the role that non-governmental organizations play; and
- draw lessons from the case studies for developing and implementing credible and effective co-operative arrangements.

Scope

We invited environment and industry (or commerce) departments in Canada, the United States and the United Kingdom to identify their partnership arrangements with the private sector. We consulted experts and individuals in industry, government and non-governmental organizations. We also reviewed documentation on partnerships to learn about their management and to identify other examples of successful initiatives.

We selected eight co-operative arrangements for more detailed study. In compiling these case studies, we carried out research and interviewed key participants from industry, government and non-governmental organizations.

Study Team

Acting Commissioner: Richard Smith
Directors: Ron Bergin and Andrew Ferguson

For information, please contact Richard Smith.

Report of the
Commissioner of the Environment and Sustainable Development to the House of Commons – 2000

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CANADA

Report of the
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to the House of Commons

Chapter 9
Follow-up of Previous Audits: More Action Needed

2000

This 2000 Report comprises 9 chapters, including "The Commissioner's Observations" and a Foreword. In order to better meet clients' needs, the Report is available in a variety of formats. If you wish to obtain another format or other material, the Table of Contents and the order form are found at the end of this chapter.

© Minister of Public Works and Government Services Canada 2000
Cat. No. FA1–2/2000–9E
ISBN 0–662–28974–9
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Chapter 9

Follow-Up of Previous Audits: More Action Needed

The follow-up work was conducted in accordance with the legislative mandate, policies and practices of the Office of the Auditor General. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

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Follow-Up of Previous Audits: More Action Needed

Main Points

9.1 The purpose of follow-up is to inform Parliament about actions that federal departments have taken to address previous observations and recommendations of the Auditor General and the Commissioner of the Environment and Sustainable Development. This follow-up chapter reports on the status of four separate audits.

9.2 We are not satisfied with the overall progress that federal departments have made in addressing the findings in Chapter 4 of the April 1997 Report of the Auditor General, Control of the Transboundary Movement of Hazardous Waste. Canada is still not in a position to know the extent to which it is fulfilling its international obligations to prevent illegal traffic of hazardous waste at the border and does not have an action plan to address significant gaps.

9.3 We are satisfied with the progress that departments have made in addressing the findings in Chapter 27 of the December 1997 Report of the Auditor General, Ozone Layer Protection: The Unfinished Journey. Environment Canada, the lead federal department, has shown strong commitment and leadership, internationally and domestically, in developing policies and programs aimed at eliminating or reducing ozone-depleting substances (ODS). Canada continues to meet its international phase-out and financial obligations and, with the provinces, maintains a national program for the recovery and recycling of ODS. Environment Canada needs to make further progress in enforcing the ODS regulations of the *Canadian Environmental Protection Act*, setting direction for federal departments, and planning for the future.

9.4 Environment Canada's enforcement program continues to be a cause of significant concern. We examined enforcement activities in the audits of the transboundary movement of hazardous waste and ozone layer protection. In our follow-up we found little or no improvement in many enforcement-related activities. Environment Canada provided us with conflicting data on inspection activities at the border.

9.5 With respect to Chapter 4 of the May 1998 Report of the Commissioner of the Environment and Sustainable Development, Canada's Biodiversity Clock Is Ticking, we are satisfied overall with the progress that departments have made. We recognize that the implementation of the Canadian Biodiversity Strategy is a complex task. Departments realize that there is still much work to be done at the federal and national levels to fully integrate biodiversity into their programs and policies.

9.6 We believe that the Canadian Environmental Assessment Agency has taken reasonable steps to address the findings directed to it in Chapter 6 of the Commissioner's 1998 Report. Overall, however, we are not satisfied with the progress made by departments in correcting the deficiencies noted.

Introduction

9.7 This Office's policy is to follow up on previous reports of the Auditor General and the Commissioner of the Environment and Sustainable Development. The primary objective of this work is to ascertain whether the departments have addressed the recommendations and observations of previous reports and to provide a progress report to Parliament. Follow-up work is not a re-audit of the subject matter; rather, we base our findings on assertions made by departmental management. The field work for this follow-up ended 31 December 1999. Since the end of our field work, however, some departments have informed us that they have been continuing to address our recommendations and observations.

9.8 Details on the objectives, methodology and scope of the follow-up work (including the federal departments involved) is contained in the **About the Follow-up** section at the end of this chapter. In this chapter, the term "department" is used generically to include federal departments and agencies.

9.9 **Audit-by-audit follow-up.** This follow-up chapter outlines the work departments undertook to address the observations and recommendations of four previous audits:

- Control of the Transboundary Movement of Hazardous Waste (Chapter 4, April 1997 Report of the Auditor General)
- Ozone Layer Protection: The Unfinished Journey (Chapter 27, December 1997 Report of the Auditor General)
- Canada's Biodiversity Clock Is Ticking (Chapter 4, May 1998 Report of the Commissioner of the Environment and Sustainable Development)
- Environmental Assessment: A Critical Tool for Sustainable Development (Chapter 6, May 1998 Report of the Commissioner of the Environment and Sustainable Development)

9.10 In the following sections, discussion of each of these previous audits is organized in the following way:

- **Background.** A brief summary of the subject matter addressed in the original audit chapter, the main findings in that chapter, and any relevant changes since then (for example, new scientific information, new government policy).
- **Conclusion.** The central message we are conveying to parliamentarians about departments' overall progress.
- **Observations and Summary.** Includes a discussion of departmental actions and progress on key selected observations/recommendations, as well as a table summarizing departmental progress on each observation/recommendation. In the table, we have assigned to the action on each significant observation or recommendation one of three ratings as set out below. These ratings reflect our consideration of such factors as the complexity of the recommendation, the number of departments involved, the amount of time elapsed since we reported, and the reasonableness of departmental action.

☆ ***Fully addressed*** — The department has fully addressed the original audit finding and thus need not take additional action. Our Office will not follow up further.

✓ ***Satisfactory progress*** — The department has made reasonable progress in addressing the original finding, but must take some additional action. Our Office will do further follow-up work.

✗ ***Unsatisfactory progress*** — The department has not made reasonable progress in addressing the original finding, and must take considerable additional action. Our Office will do further follow-up.

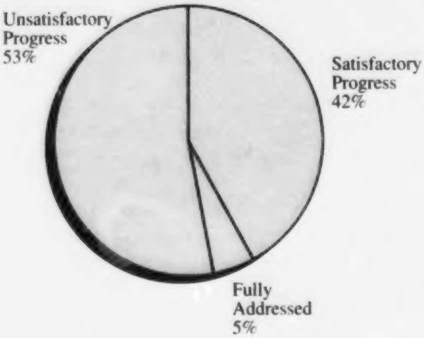
9.11 Common themes and messages. In addition to the audit-by-audit follow-up work, we have analyzed the four audits in order to identify new insights and common issues. Four themes emerged from this analysis: closing the implementation gap, filling information gaps, demonstrating leadership, and managing relationships. That section of the chapter discusses the relevance of these themes to each audit.

9.12 Exhibit 9.1 shows the extent to which departments have addressed the recommendations and observations of all four audits. Only five percent of recommendations have been "fully addressed", while departments have made unsatisfactory progress on a disappointingly high 53 percent.

9.13 In our view, the observations and recommendations contained in the original chapters remain valid and pertinent. Although we are encouraged that departments are acting on many fronts, none of the subject matters addressed in the four audits has yet received a clean bill of health. We believe that the departments need to take additional action and our Office will need to do further follow-up work.

Exhibit 9.1

Implementation of Recommendations and Observations



Control of the Transboundary Movement of Hazardous Waste — 1997, Chapter 4, Report of the Auditor General

Background

9.14 Improper disposal of hazardous waste can put Canada's environment and the health of Canadians at risk. The export and import of hazardous waste has been the subject of various international agreements because of their environmental implications. In 1986, Canada entered into a bilateral agreement with the United States that requires the exporting country to notify the importing country of each proposed shipment of hazardous waste. The agreement also requires both countries to enforce domestic laws and regulations governing the transboundary shipment of hazardous waste. Canada is further committed to the Basel Convention on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal (1992) and other agreements. These agreements are described in more detail in the 1997 chapter.

9.15 Our April 1997 chapter on hazardous waste assessed whether Environment Canada, in co-ordination with other federal departments and the provinces, had established an effective and comprehensive regime for controlling the transboundary movement of hazardous waste, consistent with Canada's domestic and international environmental commitments and obligations. We concluded that Canada was not in a position to know the extent to which it was fulfilling its international obligations to prevent illegal traffic at the border. We also determined that:

- compliance promotion was generally good but there were significant weaknesses in the enforcement program;
- there was little chance of detecting illegal traffic at the border;
- there was limited enforcement action at the border to detect illegal traffic in hazardous waste; and
- few charges had been laid for illegal shipments of hazardous waste, with even fewer convictions.

Conclusion

9.16 Overall, we are not satisfied with the progress that federal departments have made in addressing our 1997 findings.

We are not satisfied with the progress that federal departments have made in addressing our 1997 findings.

9.17 Our follow-up found that Canada is still not in a position to know the extent to which it is fulfilling its international obligations to prevent illegal traffic of hazardous waste at the border. Furthermore, Canada still has no comprehensive action plan to address long-standing and significant gaps in the enforcement of regulations governing the transboundary movement of hazardous waste.

In 1997, we concluded that Canada was not in a position to know the extent to which it was fulfilling its international obligations.

Observations and Summary

9.18 **Manifest compliance rates**. The rates of compliance in completing hazardous waste manifests have improved. Environment Canada has been working with industry to encourage it to submit manifest documentation related to imports and exports of hazardous waste as required by law. As a result, compliance rates in 1998 were over 90 percent for generator and receiver copies of manifests and disposal certificates. Compliance rates for border copies of the manifests were 56 percent for imports and 53 percent for exports.

Compliance in completing notifications of hazardous waste cross-border transport has improved.

9.19 **Detecting illegal traffic.** There has been limited progress on quantifying the extent of potential illegal traffic of hazardous waste entering or leaving Canada. Canada Customs and Revenue Agency, Customs Border Services and Environment Canada agreed to do the

We are concerned about the reliability of Environment Canada's data on border-related enforcement activity.

necessary analysis. Environment Canada regularly analyzes legal shipments of hazardous waste entering and leaving the country and has begun to do so by mode of transportation, including hazardous waste entering and leaving by ship and train. This analysis did not address the extent of potentially illegal traffic. Environment Canada enforcement staff claim to have had insufficient resources to quantify illegal traffic.

9.20 It is unclear whether inspection activity at the border has increased or decreased. In our 1997 audit, we found that border inspections in 1995–96 numbered five in the Quebec region, 15 in the Ontario region and one in the Pacific and Yukon region. In our follow-up, Environment Canada provided us with conflicting data on the number of border inspections in each of these regions for 1997–98 and 1998–99. Environment Canada told us that it is still standardizing definitional issues related to inspections and procedures for reporting them. We are concerned about the reliability of Environment Canada's data on border-related enforcement activity.

9.21 Environment Canada still has only a limited capacity to test samples of suspect shipments for hazardous waste. In 1997, we reported that the Department had taken no samples in the Quebec region in 1995–96, none in the Pacific and Yukon region, and 12 in the Ontario region. Environment Canada reports that in 1998–99 four samples were taken in the Quebec region, three in the Pacific and Yukon region, and four in the Ontario region.

Environment Canada still has a very limited infrastructure for providing intelligence data.

9.22 There have been some improvements in training. Environment Canada and the Canada Customs Revenue Agency (CCRA) collaborated to produce a computer-based module available to Customs inspectors. This self-teaching module is designed to assist Customs inspectors in recognizing hazardous waste. As of December 1999, no information was available on the number of Customs officers who have taken the training, or on its effectiveness.

9.23 Controlling exports: the revised Memorandum of Understanding has not been finalized or implemented. To comply with procedures established for the Export and Import of Hazardous Wastes Regulation, exporters of hazardous waste are required to leave a copy of their documentation (letters of authorization, notice forms and manifests) with the Customs office when they exit. In 1997, we observed that the limited facilities to deal with exports hampered the efforts of Customs officers. We noted in 1997 that the Memorandum of Understanding (MOU) between Environment Canada and the Canada Customs and Revenue Agency (then Revenue Canada) was silent on Customs' responsibility to collect the documentation required for exports. The two parties committed to reaching a new agreement by 31 March 1998.

9.24 At the time of our follow-up, they had made very little progress. An omnibus MOU between the two organizations is still in draft form and there has been no notable progress on developing an appendix to specifically address hazardous waste issues. As a result, there is still no agreement that addresses Customs' responsibility for collecting documentation required for exports. Nor is there an action plan or timetable for improving the compliance of exporters required to leave documentation at the border.

9.25 Providing intelligence data. Environment Canada still has a very limited intelligence infrastructure. In 1997, we reported that Environment Canada was not providing Customs with information on shipments that should be subjected to inspections, largely because it lacked an adequate intelligence infrastructure. This situation has not improved. Environment Canada told us that it plans to hire intelligence staff to provide this information. Action plans are in the early stages of development and do not include timetables.

9.26 In 1997, we noted the advantages of a joint force operation approach that would capitalize on the existing expertise in Environment Canada, Customs Border Services, the RCMP and other agencies. At the time, Environment Canada agreed to provide the leadership needed to establish such an approach. Three years later, a joint force operation approach has yet to be implemented.

9.27 Analyzing the international agreement. In 1997, we recommended that once definitional issues were resolved, Environment Canada should determine whether it needed to analyze both the positive and negative environmental effects of a proposed ban on shipping recyclable hazardous waste from developed to developing countries. Environment Canada has completed that analysis and has participated actively in discussions on the shipment of recyclable waste. It reports that it assessed environmental and economic factors in developing its position. It has agreed to the lists of banned shipments included in the February 1998 annex to the Basel Convention.

9.28 Our assessment of progress made since our 1997 audit is summarized in Exhibit 9.2.

Department's comments: *Environment Canada has been working to address the enforcement observations and issues raised in the chapters on* Control of the Transboundary Movement of Hazardous Waste *and* Ozone Layer Protection: The Unfinished Journey. *The national enforcement program has put in place a broad-based action plan that addresses policy, management, enforcement tools and resources. In 1999–2000, additional resources were reallocated to the program to allow some staffing and basic training to take place. The Budget 2000 confirmed increases to the ongoing resources for the enforcement program; these new resources will be directed to high priorities.*

The improvements to the enforcement program raised by the Commissioner are recognized by Environment Canada as necessary to ensure the overall effectiveness of the regulations. Both Export and Import of Hazardous Wastes and Ozone Depleting Substances regulations are priorities for Environment Canada's Enforcement Program. Additional staff are being recruited and trained to add to and strengthen the inspection, investigative and intelligence capacity of Environment Canada. Comments in this chapter about border-related data, intelligence, training and co-operation mechanisms with Canada Customs have been addressed or will be in the coming months.

A joint force operation approach has yet to be implemented.

Exhibit 9.2

Control of the Transboundary Movement of Hazardous Waste — Summary of Follow-up Findings

Chapter Paragraph	Recommendation/ Observation	OAG Assessment	Comments
	Promoting compliance		
4.48	Improve rates of compliance with manifests and disposal certificates	✓	Import and export manifest and disposal certificate reporting has increased to over 90% in most categories
	Detecting illegal traffic		
4.56	Quantify illegal traffic	✗	EC reports that staff are being hired as of December 1999
4.59	Environment Canada (EC) to provide training	✓	Canada Customs intranet training available as of December 1999
4.63	Develop a strategy for analyzing samples	✗	Training being provided. Sampling frequency remains low
4.68	Quantify ship and rail traffic and determine potential illegal traffic	✗	December 1999 report identifies legal hazardous waste traffic by ship and rail. More analysis needed to determine potential illegal traffic
	Controlling exports		
4.86	MOU silent on exports	✗	Hazardous waste appendix to MOU not yet completed
	Providing intelligence data		
4.91	EC to provide intelligence information to Customs	✗	Not happening on a systematic basis. EC to hire intelligence staff
4.96	EC to lead in establishing joint force operations	✗	Recommendation not implemented. EC to hire necessary staff
	Analyzing the international agreement		
4.102	Once definitional issues resolved, EC to analyze effects	☆	International definitions have been resolved, analysis has been completed, Canada agreed to adopt Hazardous Waste lists

☆ fully addressed ✓ satisfactory progress ✗ unsatisfactory progress

Ozone Layer Protection: The Unfinished Journey — 1997, Chapter 27, Report of the Auditor General

Background

9.29 The depletion of the stratospheric ozone layer continues to be one of the most serious environmental issues confronting Canada and countries around the world. Ozone layer depletion results in increased levels of ultraviolet-B radiation at the Earth's surface, and this directly impacts the health of Canadians and their environment. Because of its northern location, Canada is one of the countries most at risk from the effects of ozone layer depletion. The most recent scientific assessment indicates that the ozone layer is still vulnerable. The United Nations Environment Program stresses the importance of continued global commitment if the ozone layer is to recover by 2050.

9.30 Our 1997 chapter addressed several aspects of the federal government's program for protecting the ozone layer. It examined Canada's implementation of the international *Montreal Protocol on Substances that Deplete the Ozone Layer* (and related domestic controls on ozone-depleting substances), the federal-provincial National Action Plan on the Recovery and Recycling of CFCs, public education, and the management of ozone-depleting substances (ODS) in federal operations.

9.31 Overall, our 1997 audit reached positive conclusions about the federal government's ozone layer protection program. At the global level, ozone layer protection was characterized as a story of determination and achievement, and a demonstration of sustainable development in action. Our audit found that Canada was fully meeting its obligations to control ODS under the *Montreal Protocol*, and that its accomplishments compared favourably with, and in some cases exceeded, those of other countries. We gave credit to Environment Canada for its progress in promoting the recovery and recycling of CFCs through the National Action Plan, and for its efforts in co-ordinating a complex activity to harmonize regulations across Canada.

Ozone layer depletion remains a serious environmental issue. The journey is still unfinished.

9.32 The 1997 chapter also identified some weaknesses in the federal government's management of ozone layer protection, notably in the enforcement of regulations under the *Canadian Environmental Protection Act (CEPA)*, the need to better target public education, and the "not so greening" of federal operations. Perhaps most important, the subtitle of the chapter, The Unfinished Journey, reflected our strong belief that the job was not complete (and that future generations would have to cope with the legacy left to them). We made nine recommendations for improvement.

Conclusion

9.33 Overall, we are satisfied with the level of action departments have taken on our 1997 recommendations and observations. Environment Canada, the lead federal department, continues to show strong commitment and leadership, both internationally and domestically, in developing policies and programs aimed at eliminating or reducing ozone-depleting substances. Canada continues to meet its phase-out obligations (accurate to 1998) and financial obligations under the *Montreal Protocol* (10 percent of 1999 obligations remained outstanding at end of our field work). With the provinces, Environment Canada maintains a national program for the recovery and recycling of ODS. Public education programs are focussing more on vulnerable populations, such as school age children. Moreover, federal departments are now implementing environmental management systems. This should strengthen the

Canada continues to meet its phase-out obligations and shows commitment and leadership.

management of ODS in federal operations.

9.34 Some areas require further progress, notably enforcing the *CEPA* regulations on ODS, setting direction for federal departments, and planning for the future.

Environment Canada's inspection program has significant weaknesses.

Observations and Summary

9.35 Enforcement of the *CEPA*. Environment Canada's inspection program still has the significant weaknesses that we cited in the 1997 chapter, including a lack of consistency in identifying the regulated community and in planning and implementing inspections. Environment Canada has analyzed its overall enforcement requirements (including those beyond ODS regulations) and has proposed plans to increase the number of full-time designated inspectors.

9.36 Canada's National Action Plan. In 1992, the Canadian Council of Ministers of the Environment published a *National Action Plan for Recovery, Recycling and Reclamation of CFCs*. In our 1997 audit we noted that many of the tasks set out in the 1992 plan had been accomplished, but there were a few weak areas. We recommended that Environment Canada, through the Federal-Provincial Working Group (FPWG), assess the economic and environmental significance of differences in provincial regulations that govern ODS use, recovery and recycling. Environment Canada informed us that it had proposed such a study to the FPWG, but the Group decided instead to study the notable differences in provincial regulations, without focussing explicitly on their economic and environmental significance. Environment Canada has advised us that an analysis has commenced but is not completed.

New regulations improve the control of ozone-depleting substances (ODS) in federal departments.

9.37 The not-so-greening of government operations. Substantial quantities of ODS are used and stored in federal facilities across Canada. Over the past decade, the federal government has committed to leading the way by greening its own operations. In 1997, we noted that departmental ODS strategies did not support such leadership and were limited in their reach. Few departments, for example, had established early phase-out dates or set direction for using alternatives. Rather, departmental policies sought to minimize ODS emissions from operational equipment while maximizing the equipment's operational life. Departments report that this is still the case.

9.38 More encouraging, however, is that the federal government halocarbon regulation took effect on 1 July 1999. Environment Canada, National Defence, Transport Canada and Public Works and Government Services Canada report that they have prepared inventories of ODS equipment to support implementation of the regulations. Fisheries and Oceans has such an inventory for the Coast Guard but not for its other operations.

9.39 In 1997 we also noted the absence of government-wide direction. We recommended that the federal government assign responsibility and authority to Environment Canada or another department to clearly articulate its expectations for leadership in managing and eliminating ODS in federal operations. This recommendation has not been implemented. The federal halocarbon regulation requires departments to maintain their equipment so as to minimize releases and eliminate some but not all uses of ODS. In our view, this remains a serious gap.

9.40 Turning to the future. The challenges facing governments in their quest to solve ozone layer depletion have changed dramatically since the *Montreal Protocol* was introduced. Our 1997 audit examined how Environment Canada was assessing its options and priorities. We recommended that the National Action Plan be revised to include several components of effective accountability.

These would include a demonstration of the expected costs and benefits; more clearly articulated roles, tasks and responsibilities; development of measurable objectives, targets and outcomes; procedures for reliable reporting on performance; and mechanisms to provide for redress and necessary program adjustments.

9.41 We believe that Environment Canada has made important improvements in the accountability provisions of the new National Action Plan and note that the Plan now includes measurable objectives, targets and tasks for each level of government. It does not contain information on expected benefits and costs, procedures for reliably measuring and reporting on performance, or mechanisms to provide for redress and necessary program adjustments.

A federal position on the destruction of ODS is still missing.

9.42 In 1997, we recommended that Environment Canada clearly articulate the federal government's position on the destruction of ozone-depleting substances and equipment that uses them. Environment Canada is working with the provinces to develop a national strategy for destruction of surplus ODS but the federal government has not yet developed a position of its own. In the absence of a federal or national position, individual departments are left to develop their own approach to the storage and management of surplus ODS.

Department's comments: *With regard to the development of a federal government position on ODS destruction, a phase-out and disposal strategy is being developed nationally through the Federal-Provincial Working Group on ODS. It will address disposal issues for all jurisdictions, including federal entities. In addition, Environment Canada is preparing a disposal guide that will identify current and promising destruction technologies as well as appropriate performance parameters for destruction.*

Opportunities still exist to improve the ozone program.

9.43 Our 1997 chapter identified many new challenges facing governments around the world, describing this as an important juncture in the evolution of Canadian efforts to protect the ozone layer. We recommended that Environment Canada direct its available resources toward activities that maximize ozone recovery, aided in part by consultation with affected stakeholders and by structured analysis of opportunities to reduce risk. While Environment Canada has shown that it is responsive to evolving issues of domestic and international concern, we believe that opportunities still exist to more formally take stock of departmental ozone programs and adjust activities as appropriate.

9.44 Our assessment of progress made since our 1997 audit is summarized in Exhibit 9.3.

Exhibit 9.3

Ozone Layer Protection: The Unfinished Journey — Summary of Follow-up Findings

Chapter Paragraph	Recommendation/ Observation	OAG Assessment	Comments
	Meeting our international obligations		
27.39	Meet and exceed commitments under *Montreal Protocol*	☆	Canada continues to meet its commitments and continues to show leadership
27.50	Environment Canada (EC) should formalize its bilateral assistance efforts	✓	Full-time staff hired in December 1999. Several projects implemented but activities with CIDA not formalized
	Enforcing the *CEPA*		
27.58	EC's inspection plans should identify in a consistent manner companies subject to inspection	✗	EC has not yet consistently identified companies for inspection
27.59	EC should apply its criteria for selecting companies to inspect consistently across all regions	✗	EC has yet to apply consistent selection criteria across all regions
27.60	EC should determine/carry out the level of inspection coverage necessary to ensure compliance	✗	No progress. EC has not demonstrated the level of effort necessary to ensure compliance
	Canada's National Action Plan		
27.70	EC should undertake an economic and environmental study to assess the significance of differences in provincial legislation	✓	The FPWG agreed to assess "significant differences." This assessment has commenced but is not completed
	Public education		
27.81	Health Canada and EC should assess the significance of surveys and communication activities directed at high-risk groups	✓	EC has assessed surveys; as a result, it has increased its emphasis on targeting youth. Health Canada's and EC's planning activities point to an increased focus on pre-teens
	Greening of government operations		
27.93	ODS strategies are limited in their reach	✓	Halocarbon regulations were promulgated July 1999. Most departmental plans include use of ODS equipment to the end of its economic life
27.103	Federal government should assign authority to articulate its expectations for leadership in management of ODS in federal operations	✗	No department has been assigned the role of articulating the federal position on leadership. Halocarbon regulations address procedures for using ODS equipment
	Turning to the future		
27.110	The Revised National Action Plan should include components of effective accountability	✓	Revised NAP, developed January 1998, includes measurable objectives, targets and tasks but not costs, benefits, performance measurement or redress mechanisms
27.121	EC should clearly articulate government position on ODS destruction	✗	EC has commenced work with provinces but federal position has not been developed
27.128	EC should direct efforts toward activities that maximize benefits	✓	EC did internal analysis of ways to optimize activities. We believe opportunities still exist

☆ fully addressed ✓ satisfactory progress ✗ unsatisfactory progress

Canada's Biodiversity Clock Is Ticking — 1998, Chapter 4, Report of the Commissioner of the Environment and Sustainable Development

Background

9.45 In 1992, at the Earth Summit in Brazil, Canada signed the *United Nations Convention on Biological Diversity* and, later that year, ratified it. This Convention was developed in response to international concern over the global loss of plant and animal species and their habitats.

9.46 Our 1998 chapter on biodiversity reviewed progress the federal government had made in implementing the commitments of the Convention. At that time, developing the Canadian Biodiversity Strategy was Canada's primary response to the Convention. The implementation of the Strategy was still in its early stages and we noted that progress was slower than projected and that deadlines had been missed.

9.47 Our chapter cited the need for a federal implementation plan as a tool to achieve national goals and measure performance. We also concluded that future reporting at the international, federal and provincial levels needed to reflect progress toward predetermined and measurable targets.

Conclusion

9.48 Overall, we are satisfied that progress has been made in addressing the findings of our audit. Our follow-up work noted advances in three areas. First, departments are developing performance measurement frameworks for biodiversity. Second, Canada is participating in several important initiatives, including the development of an international reporting framework. It is also involved in efforts to increase the participation of Indigenous peoples in biodiversity conservation. Finally, new partnerships have been formed to enhance co-operation, and the mandates of older committees are being reviewed where renewed focus is needed.

Three federal biodiversity modules remain unfinished.

9.49 In certain areas, however, departments are not meeting their projections. Specifically, three of eight federal biodiversity modules and the federal implementation plan remain unfinished. The completed modules lack elements that we had identified as key to their effectiveness.

9.50 In addition, we were told that adequacy of resources remains a concern, particularly for scientific capacity and for making biodiversity information more available. For example, the federal government is still not able to report on the overall state of biodiversity in Canada. Departments recognize that continued effort is required at the federal and national level. In the future we will revisit the federal government's actions to address the issue of biodiversity.

Observations and Summary

9.51 **Biodiversity modules.** The deadline for the completion of the eight federal modules was April 1997. Currently, three remain unfinished: aquatic diversity, ecological management and international co-operation. Since our 1998 audit, three modules have been completed: education, protected areas and wildlife. However, they do not adequately incorporate the key elements of time frames, resources to be allocated, expected results and performance indicators (see Exhibit 9.4). Without these elements, we believe that Canada's ability to deliver and report on biodiversity initiatives is compromised.

There is no federal implementation plan for biodiversity.

9.52 **Federal implementation plan.** There is no federal implementation plan for biodiversity. As noted in our 1998 audit, such a plan is a fundamental component of Canada's efforts to meet its international and domestic biodiversity

The government has no ministerial "home" for biodiversity.

commitments. Environment Canada states that this plan will summarize all eight modules. It is still our view that the completed set of modules will not constitute an adequate federal implementation plan unless all the elements identified in Exhibit 9.4 are addressed.

9.53 Performance measurement and reporting. Efforts are now under way in Agriculture and Agri-Food Canada, Environment Canada and Natural Resources Canada to develop and implement departmental performance measurement frameworks for biodiversity. The goal is for these departmental performance frameworks to form the basis of a federal framework, under which individual departmental results can be consolidated and reported to Parliament and Canadians. These efforts are in response to our 1998 observation that the absence of some key elements from the modules limits their usefulness as a basis for a federal implementation plan.

Performance measurement frameworks are being developed.

9.54 Agriculture and Agri-Food Canada's performance measurement framework for its biodiversity module is noteworthy. In addition to the elements we identified in 1998 as critical, the Department's framework is linked to business lines, incorporates key result areas, and identifies lead personnel for specific departmental actions. Departmental officials told us that the framework has facilitated reporting and that biodiversity is now viewed as an important component of the Department's core business.

Exhibit 9.4

Biodiversity Modules Completed Since 1998 and Elements They Address

Module	Time Frame	Resources to be Allocated	Expected Results	Performance Indicators
Protected Areas	Addressed	Not Addressed	Addressed	Addressed*
Wildlife	Addressed*	Not Addressed	Addressed	Addressed*
Education	Not Addressed	Not Addressed	Not Addressed	Not Addressed

*Addressed, but to a very limited extent.

9.55 It is our view that performance measurement frameworks are necessary to implement the modules that have been completed to date. An opportunity exists to develop performance frameworks in tandem with the modules yet to be completed.

9.56 Federal-provincial-territorial co-ordination. There is still no ministerial "home" for biodiversity. Biodiversity receives only limited attention by ministerial committees because of the many other competing agenda items. The new Canadian Endangered Species Conservation Council will address issues such as species at risk and their habitat; however, other important elements of biodiversity may be overlooked. Environment Canada informed us that discussions have been initiated with the provinces to rejuvenate commitment to the Canadian Biodiversity Strategy at the ministerial level.

9.57 The Federal-Provincial-Territorial Working Group on Biodiversity also provides an opportunity for interjurisdictional action on biodiversity. Since the release of the Canadian Biodiversity Strategy in 1996, provincial-territorial attendance at Working Group meetings has been very low; often only one or two provinces are represented. However, Working Group members are trying to increase participation. At its 7 October 1999 meeting, the Working Group decided that a greater focus on domestic implementation is needed, as well as a program of work leading to tangible federal-provincial-territorial outputs.

9.58 International reporting framework. To improve international reporting, Canada's Biodiversity Convention Office (BCO) is participating with representatives of eight other countries in an initiative to develop and test a revised international performance reporting matrix. This matrix will form the basis of the next Country Reports of the 176 parties to the Convention, expected in 2001.

9.59 Maximizing resources — Biodiversity Convention Office (BCO). The BCO is a focal point for Canada's biodiversity efforts. Given its small resource base, however, it faces a daunting challenge to meet the public's expectations to advance and report on domestic implementation as well as to continue to monitor and co-ordinate Canada's international commitments to the *United Nation's Convention on Biological Diversity*. It is addressing this challenge by encouraging Environment Canada to integrate biodiversity into its planning, priority-setting and resource allocation decisions. In addition, the BCO is trying to achieve a broader recognition of biodiversity by encouraging other federal departments and various stakeholder groups, such as Indigenous peoples, to place it on their agendas.

9.60 Maximizing resources — other federal departments. By its very nature, biodiversity cuts across departments and jurisdictions. Limits on resources have created the need to find innovative ways to co-ordinate efforts and maximize opportunities. For example, under the Federal Biosystematics Partnership, Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans, Natural Resources Canada and the Canadian Museum of Nature have agreed to share data and resources. Other federal efforts include re-examining the mandates of existing biodiversity committees to maximize their potential.

9.61 Biodiversity science capacity. The federal government needs to enhance its capacity for biodiversity research, which is highly complex and wide-ranging. Biosystematics is one area where a concerted effort has been made to address this need. For example, the Federal Biosystematics Partnership is developing a needs assessment to identify gaps in the federal capacity to do biosystematics research. The Partnership has also prepared a proposal for joint funding to acquire taxonomic and bioinformatics specialists. These personnel would be distributed among partners involved in the proposal.

9.62 In 1998, we recognized that biological data were often not in a standardized or accessible format. In response to this observation, three federal departments and one Crown corporation — Agriculture and Agri-Food Canada, Environment Canada, Natural Resources Canada, and the Canadian Museum of Nature — formed the Canadian Biodiversity Information Initiative. This initiative led to the development of an electronically accessible "prototype" database on "Butterflies of Canada". Recently, the MOU among the federal government's five natural resource departments identified the further development of this initiative as one of six priorities under the title "The Biota of Canada Information Network".

Biodiversity research needs to be enhanced.

9.63 In an appendix to the 1998 chapter, we reported specific challenges being encountered by Agriculture and Agri-Food Canada. We indicated that some kind of indicator was needed for the long-term economic security of the sector — which depends, in part, on having a range of products. The Department is making significant progress in most of these areas but still needs indicators of domesticated biodiversity. Agriculture and Agri-Food Canada is addressing this challenge by working in collaboration with other OCED countries to develop such indicators at the international level. The Department views this as the most appropriate approach because most of the biodiversity that has been domesticated and is available as a resource for use in Canada is widely dispersed throughout the world.

9.64 Our assessment of progress made since our 1998 audit is summarized in Exhibit 9.5.

Exhibit 9.5

Canada's Biodiversity Clock Is Ticking — Summary of Follow-up Findings

Chapter Paragraph	Recommendation/ Observation	OAG Assessment	Comments
4.17, 4.23	Complete biodiversity modules	✗	Three of eight modules not yet complete. Deadline for completion was 1997
4.20	Develop an international reporting framework	✓	Canada participating in developing and formalizing a framework for international reporting
4.24, 4.33	Develop a federal implementation plan	✗	Not yet developed; requires completion of all modules
4.27, 4.31	Maximize resources 1. Biodiversity Convention Office 2. Other federal departments 3. Biodiversity science capacity	✓	1. Encouraging integration of biodiversity into a variety of committees 2. Progress made in developing new committees and renewing existing ones to maximize use of resources; creation of the Federal Biosystematics Partnership 3. Challenges still exist, particularly for research and availability of scientific information
4.28, 4.29	Federal-provincial-territorial co-ordination	✗	Still no ministerial "home" for biodiversity; Federal-Provincial-Territorial Working Group on Biodiversity is working to define a national focus and improve turnouts for meetings
4.30, 4.34	Performance measurement and reporting	✓	Development and implementation of departmental performance measurement frameworks; efforts under way to develop a federal performance measurement framework for reporting
Appendix	AAFC's Biodiversity Action Plan 1. Content 2. Scientific information 3. Indicators of domesticated biodiversity 4. Integration with other departments	✓	The Department is making significant progress in most of these areas; however, indicators of domesticated biodiversity are still needed

☆ fully addressed ✓ satisfactory progress ✗ unsatisfactory progress

Environmental Assessment: A Critical Tool For Sustainable Development — 1998, Chapter 6, Report of the Commissioner of the Environment and Sustainable Development

Background

9.65 Environmental assessment (EA) is the examination of planned projects, programs, policies or activities to ensure that potential impacts on the environment receive careful consideration before decisions are made or actions taken. The *Canadian Environmental Assessment Act (CEAA)* came into force in 1995 and prescribes the conditions under which federal departments and agencies must conduct an environmental assessment. Departments and agencies (hereinafter referred to as departments) are responsible for ensuring that an EA of a project is conducted under the *CEAA* before they take certain actions with respect to that project. The Canadian Environmental Assessment Agency (the Agency) administers the *CEAA* and provides guidance and advice to federal departments. While the *CEAA* focusses on projects, there is also a Cabinet directive in place that calls for an environmental assessment of federal policy and program initiatives.

9.66 In 1998 we examined the implementation of the *CEAA*, the roles of the Agency and other responsible federal departments, and the extent of compliance with the Cabinet directive. In addition to the Agency, nine federal organizations were included in the scope of the audit.

The 1998 chapter identified a number of weaknesses in the implementation of the *Canadian Environmental Assessment Act*.

9.67 The chapter identified a number of weaknesses in the implementation of the *CEAA*. We concluded that environmental assessments (EAs), conducted by departments did not consider all of a project's elements or potential environmental effects, nor did departments do sufficient monitoring of mitigation measures and environmental follow-up. In addition, information for the public was deficient in environmental assessment reports and in the Federal Environmental Assessment Index. We concluded that departments and agencies had been slow to implement the 1990 Cabinet directive on environmental assessment of policies and programs.

9.68 The Agency took the lead in preparing the federal government's response to our recommendations and in working with departments to implement them. Recommendations directed to the Agency focussed on increasing the level of guidance it provides. Most of the recommendations were directed to departments and focussed on improving the quality and consistency of EAs. In our view, improvement in the quality of EAs requires co-operation between the Agency and departments.

Conclusion

9.69 We believe that the Agency has taken reasonable steps to respond to our 1998 audit findings. Following the release of the chapter, the Agency, in tandem with a mandatory five-year review of the *CEAA* and in collaboration with departments, conducted a Compliance Monitoring Review of EAs (see paragraph 9.71). It also issued guidance documents and launched other initiatives based on our recommendations.

The Agency has taken reasonable steps but departments are not making enough progress.

9.70 However, we are not satisfied that departments are making sufficient progress to fully correct the deficiencies we noted. Although eight federal entities have taken some action to improve the way they conduct EAs, they report relatively little change in their practices. These departments have also reported that they participate in committees established by the Agency. This is certainly a first step, but not enough to improve the quality of federal EAs. Even though the Agency has a lead role in developing new tools — such as operational policy statements, guidelines and training — the ultimate responsibility for good EAs in Canada rests with departments.

Observations and Summary

Some action has been taken to improve the quality of environmental assessments.

9.71 The Compliance Monitoring Review (CMR). To address the majority of the recommendations in our chapter, the Agency undertook a Compliance Monitoring Review (CMR) of EAs conducted by federal entities. The purpose of this review was to examine the quality of EAs and to assess the degree to which they complied with the *CEAA*. Eleven departments participated in the CMR, including seven of the nine federal entities we audited in 1998. As part of the review, the Agency recommended that the entities evaluate 20 EA reports according to the Agency's Compliance Monitoring Framework.

9.72 The CMR, completed in the summer of 1999, confirmed many of the observations identified in our 1998 chapter, namely:

- the need for more direction on a project's scoping;
- the need to improve screening reports with better environmental description;
- the requirement to integrate EAs earlier in project planning; and
- the need to monitor mitigation measures.

Departments have done little overall to correct the problems identified in our audit.

9.73 In our view, the CMR was an important step in further identifying weaknesses in the EA process, and an additional means of improving the quality of EAs. However, as already noted, we are concerned that departments have done little *overall* to correct the problems identified in our audit.

9.74 Two departments and two agencies took the initiative to improve their internal procedures and practices after completing their CMR. For example, Environment Canada developed specific guidelines for its EA activities. Parks Canada took advantage of the CMR to begin updating its internal procedures for improved quality of EAs. The Atlantic Canada Opportunities Agency established a new procedure for ensuring that follow-up is carried out where appropriate. The Habitat Management and Environmental Science Directorate of Fisheries and Oceans has developed an electronic screening form as a guide to completing environmental assessments.

9.75 The other departments told us that they have limited their actions to participating in the CMR and in the upcoming Quality Assurance Program, the next phase of the Agency's initiative to improve the quality of EAs. However, none of them provided us with any evidence that they have actually changed their practices in response to their CMR results.

9.76 Scoping of project and environmental effects. The 1998 audit found inconsistencies in the way departments scoped their projects and environmental effects. Scoping is still a confusing area for federal authorities. Three entities, Environment Canada, Parks Canada and Fisheries and Oceans, have analyzed court decisions on scoping, and the Agency has developed an Operational Policy Statement on scoping. However, organizations will need to develop scoping guidelines adapted to their specific activities. We noted that Environment Canada, Agriculture and Agri-Food Canada and Parks Canada have developed such guidelines; at the time of this audit, the Parks Canada guidelines were in draft form only.

9.77 Cumulative effects. Our chapter identified the need for guidance on addressing cumulative effects of projects. The *CEAA* requires departments to address cumulative effects, and this requirement has been stressed in recent legal decisions. Departments now have access to the Agency's *Reference Guide: Addressing Cumulative Environmental Effects* and to its Operational Policy Statement. The Agency also provides training to departments. We noted that two departments have tried to better integrate cumulative effects into their EAs. Environment Canada has developed a departmental position statement and provided training on cumulative effects. The Northern Affairs Program of Indian and Northern Affairs Canada, together with a working group of representatives from the settled claim areas, is developing a cumulative impact monitoring program for the Mackenzie Valley pursuant to the *Mackenzie Valley Resource Management Act*. We note that environmental assessment is an evolving area and assessing cumulative effects of a project remains a challenge for responsible authorities, but these tools should assist them.

9.78 Mitigation measures and follow-up. Mitigation measures reduce the significance of adverse environmental effects. In our 1998 chapter, we noted that while departments often attached mitigation measures to project approvals, they conducted little monitoring of these measures. Based on the information we received during our follow-up, it is still not clear if departments are monitoring these measures to see if they are respected. The departments who issue permits or licences to project proponents told us that they look at the mitigation measures when they have to monitor adherence to permit conditions, but not for every permit because of resource constraints.

9.79 Follow-up of EA is recommended when environmental effects are uncertain. The Agency has created an interdepartmental working group to identify options and tools for improving follow-up. The report *Options and Tools for Improving Follow-Up: A Discussion Paper* identifies nine root causes of follow-up problems but is primarily aimed at identifying steps for improving the process, with an action plan and target dates. The Agency is now developing an Operational Policy Statement on follow-up. The steps above have contributed to the identification of problems with follow-up, but more work is needed to ensure that departments prescribe follow-up when necessary.

It is not clear whether departments are monitoring mitigation measures.

9.80 Information for the public. The computerized Federal Environmental Assessment Index (the Index) was aimed at informing the public, at an early stage, of environmental assessments conducted by responsible authorities. As stated in our original chapter, the Index was not user-friendly for either the departments or the public. Since the May 1998 tabling of our chapter, the Agency has worked to improve the Index's functionality. It is still too early to determine if this will improve the entry of EA information by the departments and facilitate access by the public.

9.81 We noted in 1998 that the Index information was very basic and did not adequately inform the user about projects and their environmental effects. Since then, Environment Canada has begun to post its EA reports on its Web site, the "Green Lane".

9.82 An updated Cabinet directive. In 1998, our chapter identified as a major weakness the lack of compliance with the 1990 Cabinet directive on EA of policies and programs. The Agency, in collaboration with an interdepartmental team, made efforts to strengthen and clarify the Cabinet directive. Those efforts resulted in an updated directive in June 1999. It now requires an environmental assessment of plans as well. However, we have no evidence of improved compliance with the Cabinet directive. Moreover, during our interviews we found that two departments were still unaware of this updated directive, or thought it did not apply to them.

We found no evidence of improved compliance with the Cabinet directive.

9.83 Our assessment of progress made since our 1998 audit is summarized in Exhibit 9.6.

Exhibit 9.6

Environmental Assessment: A Critical Tool for Sustainable Development — Summary of Follow-up Findings

Chapter Paragraph	Recommendation/ Observation	OAG Assessment	Comments
	Looking at the right issues		
6.28	Compliance measures need to be strengthened to ensure that all proponents apply for permits and licences	✗	In general, no clear action by departments to address this recommendation
6.33	Fisheries and Oceans needs to apply the *Fisheries Act* more consistently	✓	In 1998, Fisheries and Oceans produced new guidelines to bring more consistency to application of section 35 (2) of the *Fisheries Act*; developing training and additional guidelines
6.35	Integrate EA early in the project, not at the last minute	✗	Confirmed by Compliance Monitoring Review (CMR)
6.38 & 6.39	Some federal activities are not reviewed under the *CEAA*	✓	By a new regulation, Canada Port Authorities projects now reviewed under *CEAA*. Agency working with Transport Canada to develop an EA regime for local airport authorities
6.45	Departments should develop guidelines on scoping of projects in conjunction with the Agency	✗	Agency developed an Operational Policy Statement on scoping. Recent legal decisions did not clarify. Only Environment Canada and Agriculture and Agri-Food Canada developed specific scoping guidelines. However, AECB has developed guidelines for two specific projects, which could be applied to similar projects
6.48	Information on existing project environmental assessments is often deficient	✗	Confirmed by CMR
6.50	Departments need to consider a wider range of effects for EAs of projects that require permits	✗	In general, no clear action by departments to address this recommendation
6.59	Agency should accelerate its work with departments and others to encourage assessment of cumulative effects	✓	Agency has published guidelines and provided training. Response by departments has been mixed
	Providing adequate information		
6.64 & 6.65	Index should have quicker data entry, easier access and improved search tools	✓	Agency faced technical difficulties with its system. Improved search tools, but room for additional improvement
6.68	Departments need better information in screening reports	✗	Confirmed by CMR
6.73	Agency's annual report should describe the challenges in implementing the *CEAA*	✓	More of Agency's challenges addressed in its Performance Report than previously

☆ fully addressed ✓ satisfactory progress ✗ unsatisfactory progress

(continued)

Exhibit 9.6

(continued)

Chapter Paragraph	Recommendation/ Observation	OAG Assessment	Comments
	Improving efficiency		
6.79	Class screenings could be used more to improve efficiency of EA process	✓	Two published; 11 being developed, 6 of them by INAC
	Going beyond project approval		
6.87	Departments should monitor mitigation measures	✗	No substantial progress
6.90	Departments need to ensure follow-up of environmental effects	✗	"Options and Tools for Improving Follow-up" paper suggests best practices and proposes an action plan. No clear indication that departments ensure follow-up
6.92	Agency should establish a framework for reviewing provisions and operation of the Act and collect information needed for conducting the review	✓	Agency, with participation of departments, has launched different initiatives to address this issue; among them are the Compliance Monitoring Review (CMR) and its Compliance Monitoring Framework (CMF) and the Ongoing Monitoring Program
	Achieving quality control of decentralized implementation		
6.94	Agency and departments should establish procedures to: • monitor whether EAs are conducted in accordance with the *CEAA* • ensure that the *CEAA* is applied consistently from region to region	✗	Agency developed a Compliance Monitoring Framework, which could help departments ensure more consistency. However, only Environment Canada has developed draft procedures in this area
	Setting the tone with policy and program assessments		
6.101	Improve compliance with Cabinet directive on EA of policies and programs	✗	Agency has developed new guidelines. Improved compliance yet to be demonstrated

☆ fully addressed ✓ satisfactory progress ✗ unsatisfactory progress

Common Themes and Messages

9.84 Each of the audits addressed in this follow-up chapter dealt with a separate subject. The international movement of hazardous waste, the depletion of the world's stratospheric ozone layer, the pre-project assessment of environmental impacts, and the preservation of biological diversity each present unique environmental and health threats, and therefore require unique government programs and policies.

The gap persists between stated commitments and government performance.

9.85 Reporting on these audits in a single follow-up chapter, however, was an opportunity for us to examine these subjects from a fresh perspective. We looked for common issues, themes and potential lessons learned. This section describes four common themes — closing the implementation gap, filling information gaps, demonstrating leadership, and managing relationships — using examples from the audit chapters to support them.

9.86 These themes reinforce many key principles of management systems thinking, as shown in Exhibit 9.7. While they are perhaps neither profound nor new, these principles do serve as reminders for departments to pay constant attention to the fundamentals of good management.

Closing the Implementation Gap

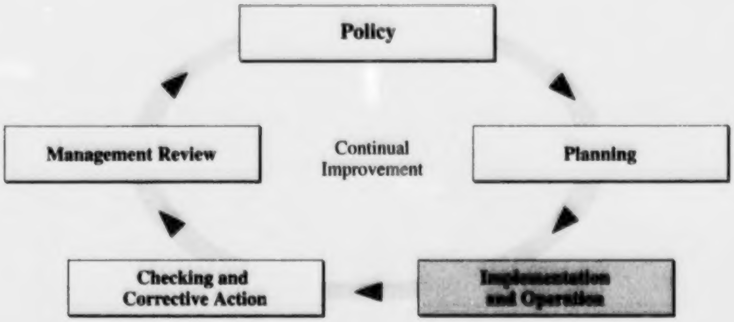
9.87 The "implementation gap" — the gap between the government's performance and its stated commitments and objectives — is one of the most common findings in reports of the Auditor General and the Commissioner of the Environment and Sustainable Development. In fact, most of the observations and recommendations made in the chapters on hazardous waste, biodiversity and environmental assessment were related to implementation gaps. As we have noted in detail in previous sections of this chapter, in our opinion the overall rate of progress in addressing these gaps has been disappointing. The federal government is weak in the implementation and operation component of a management systems approach (Exhibit 9.7). More details of this approach are presented in Chapter 1 of this report, Exhibit 1.7.

Filling Information Gaps

9.88 Each of the four audits illustrated, in different ways, the importance of information to support good decision making. This is a recurring theme in reports of the Auditor General and the Commissioner of the Environment and Sustainable Development. The audits also demonstrated that different kinds of information are needed at different times but in all cases, timely, credible and pertinent information is a key building block of good management. Information can be used to identify environmental and

Exhibit 9.7

A Management System Approach



health impacts and risks, as a core ingredient of policy and program design, to set priorities for action, and to measure the effectiveness of policies and programs.

9.89 The importance of good information is perhaps best illustrated when it is absent. In this sense, the four audits also demonstrated that "information gaps" — that is, gaps between information needed and information available — impede decisions, program development and program delivery.

Gaps in information impede decisions, program development and delivery.

9.90 Identifying risks and impacts. The chapter on environmental assessment illustrated how information is used to identify environmental risks and impacts. At its foundation, environmental assessment is a process of developing, sharing and considering information about the environment, projects and programs. Yet fundamental gaps in the information necessary to the federal environmental assessment process — portions of projects excluded, incomplete knowledge of the environment, significant effects ignored, difficulties in assessing cumulative effects, incomplete monitoring, and federal programs and policies not fully assessed — were at the very heart of the weaknesses identified in our audit of the environmental assessment process.

9.91 Information as a core ingredient. The chapter on ozone protection perhaps best demonstrated the importance of information as a core ingredient of program development and success. Characterizing ozone layer protection as a success-in-progress, the chapter noted the worldwide reliance on solid scientific and technological information to support regulatory controls. The importance of exchanging scientific evidence and information and technology were specifically cited as key global lessons learned.

9.92 As a relatively new and still evolving issue, particularly for policy makers, core information is critical to Canada's biodiversity programs. Yet as we reported in 1998, and as the Biodiversity Convention Office acknowledges, scientific information for biodiversity is not as advanced as it is for other environmental issues. Information gaps identified in the chapter on biodiversity continue to seriously impede program development. Although encouraging attempts have been made to close some of those gaps, such as the Canadian Biodiversity Information Initiative, there is still a serious lack of information and most existing information is not readily accessible.

9.93 Setting priorities and measuring compliance. Information is also critical to understanding compliance with commitments, measuring program effectiveness, and adjusting program priorities. The overall conclusion of the chapter on hazardous waste — that Canada did not know (and it still does not know) the extent to which it is complying with the requirements of the international Basel Convention — was directly linked to deficiencies in inspection and enforcement practices and intelligence information. The ozone chapter also identified information gaps related to the inspection of companies, the gathering of intelligence data and enforcement of *Canadian Environmental Protection Act* regulations.

Demonstrating Leadership

9.94 Leadership is another recurring theme in reports of the Auditor General and the Commissioner. In his first report to Parliament, the Commissioner emphasized that governments must provide "strong leadership" and "clear vision," suggesting that an important component of leadership is setting direction. In this section, we view leadership as actions taken by a department above and beyond its stated mandate, authority or role.

Leadership is needed globally, domestically and within the federal government.

9.95 While the four chapters illustrated the importance of leadership in general, they also demonstrated that different circumstances require different kinds of leadership. Sometimes leadership is needed globally, sometimes domestically (in partnerships with provincial governments, for example) and nearly always within the federal government. Some of the chapters cited positive examples of leadership by federal departments, supporting the notion that leadership is integral to achieving success. But perhaps it is because the importance of leadership is so well understood that gaps in leadership are often noticed. The four audits also identified areas where the federal government could provide stronger leadership.

9.96 Global leadership. The chapter on ozone protection credited the federal government, and Environment Canada in particular, for global leadership in developing and supporting international controls on ozone-depleting substances. Indeed, the very name *Montreal Protocol on Substances that Deplete the Ozone Layer* symbolizes Canada's leadership on this issue. The chapters on hazardous waste and biodiversity also noted selected examples of international leadership by Canada.

9.97 Some chapters also credited the federal government for its leadership in setting direction with organizations outside of the federal government. As noted in paragraphs 9.58 and 9.59, Canada's Biodiversity Convention Office recently demonstrated leadership by participating in an initiative to develop and test a matrix for international performance reporting. It has also made efforts to incorporate and encourage participation by Indigenous peoples in biodiversity conservation.

Gaps in leadership within the federal government remain a serious and vexing concern.

9.98 Leadership in the federal government. Notwithstanding examples of the leadership we have cited, in our view, gaps in leadership within the federal government remain a serious and vexing concern. Many of the weaknesses identified in the chapters have their roots in the need to determine and commit to appropriate leadership roles within the federal government. Examples include the lack of a ministerial home for biodiversity, the lack of direction in phasing out and disposing of ozone-depleting substances from federal operations, Environment Canada's problems in providing federal enforcement agencies with intelligence data on hazardous waste and, perhaps most alarming, the "wait-for-the-Environmental Assessment Agency-to-act" attitude of federal departments toward correcting deficiencies in environmental assessments.

Managing Relationships

9.99 Each of the audits addressed in this chapter demonstrated that managing relationships effectively is critical to the success of a program. In some cases relationships, like leadership, are required among federal departments. The importance of relationships in program delivery is demonstrated by the fact that many of the recommendations in the four chapters were directed toward several departments. But the chapters also illustrated that relationships can be critical between federal and provincial governments and between the federal government and non-government stakeholders. As the examples that follow show, establishing and sustaining effective partnerships can be a challenge.

9.100 Multi-stakeholder relations. As noted in the chapters on hazardous waste and ozone protection, relationships with non-government organizations are important. One feature contributing to the reduction of ozone-depleting substances was the high level of consultation with affected stakeholders and partnering with industry to develop and implement solutions. Similarly, improving the relationship between Environment Canada program staff and industry was key to achieving increased compliance rates for the hazardous waste manifests.

9.101 In other cases, sustaining relationships has been a challenge. For example, after signing the *United Nations Convention on Biological Diversity*, a multi-stakeholder advisory body to the federal government — the Canadian Biodiversity Forum — successfully worked together to establish the Canadian Biodiversity Strategy. However, since the release of the Strategy, the Forum has lacked a clear product on which to focus its attention.

9.102 Relations among federal departments. Working relationships among federal departments present ongoing challenges. The chapter on hazardous waste identified weaknesses in the ability of federal departments to work together to enforce the *CEPA* Export and Import of Hazardous Wastes Regulation. An MOU between Environment Canada and the Canada Customs and Revenue Agency to clarify roles and responsibilities remains unsigned. There has been little progress on developing an appendix specifically intended to address hazardous waste issues. As a result, there is little evidence of improvement in the control of illegal shipments of hazardous waste at the border.

9.103 The need for federal departments to work co-operatively with each other was identified as a significant issue in the chapter on environmental assessment. It underscored the need for the Canadian Environmental Assessment Agency and the responsible departments to work together more closely to interpret the assessment requirements consistently and to share best practices. The Regional Environmental Assessment Committees have reportedly provided a valuable forum for co-operation.

Managing relationships effectively is critical to the success of a program.

9.104 Federal-provincial-territorial relations. The Federal-Provincial-Territorial Working Group on Biodiversity is struggling to find a focus and a shared vision. Present members believe they are concentrating too much on preparing for international meetings and not enough on the domestic front. Shifting attention to federal and national concerns could improve the Working Group's cohesion and advance its efforts.

9.105 As we reported in the chapter on ozone protection, successful partnerships have been vital to the success of the *Montreal Protocol* globally and to the Canadian ozone layer protection program specifically. Most notable is the long-standing and positive relationship between the federal and provincial governments in the National Action Plan for the Recovery and Recycling of ODS. This partnership was founded on a shared vision and has been sustained over 10 years. Provinces consistently participate in Federal-Provincial Working Group meetings. Shared goals and sustained momentum have been key to this successful partnership.

Effective partnerships have been vital to the success of the *Montreal Protocol* both globally and domestically.

About the Follow-Up

Objective

The primary purpose of follow-up is to ascertain whether recommendations and observations have been addressed by entities, and to provide information to Parliament on an entity's progress.

Approach

We asked the entities to provide an update of actions they have taken to address the recommendations and significant observations in the original audits. To supplement their responses, entities provided documentation as evidence of their actions. We reviewed that information and also conducted interviews with departmental officials where necessary.

Scope

Follow-up work on Control of the Transboundary Movement of Hazardous Waste (Chapter 4, April 1997) focussed on Environment Canada and the Canada Customs and Revenue Agency.

We conducted follow-up work on Ozone Layer Protection: The Unfinished Journey (Chapter 27, December 1997) in the following six departments and one agency: Canadian International Development Agency, National Defence, Environment Canada, Fisheries and Oceans, Health Canada, Public Works and Government Services Canada and Transport Canada.

Follow-up work on Canada's Biodiversity Clock Is Ticking (Chapter 4, May 1998) was conducted in the following four departments: Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans and Natural Resources Canada.

We conducted follow-up work on Environmental Assessment: A Critical Tool for Sustainable Development (Chapter 6, May 1998) in the following 10 departments and agencies: Agriculture and Agri-Food Canada, Atlantic Canada Opportunities Agency, Atomic Energy Control Board, Canadian Environmental Assessment Agency, Parks Canada Agency, Environment Canada, Fisheries and Oceans (Habitat and Coast Guard), Indian and Northern Affairs Canada (Northern Affairs Program, Indian and Inuit Affairs Program), Public Works and Government Services Canada and Western Economic Diversification Canada.

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